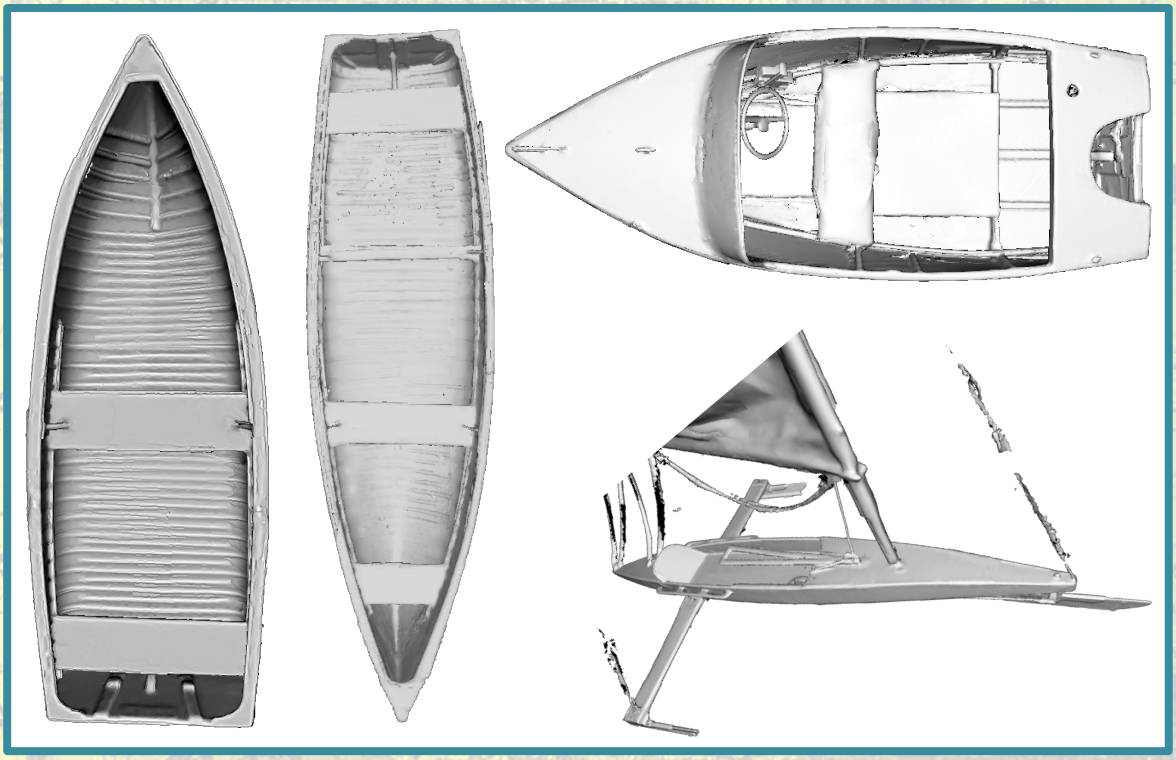
MARITIME HERITAGE MINNESOTA

CLEAN WATER LAND & LEGACY AMENDMENT

Ann Merriman
Christopher Olson

Minnesota Small Craft Projects Series

Minnesota Wooden Watercraft Analysis and 3D Scanning Project Report



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Acknowledgments

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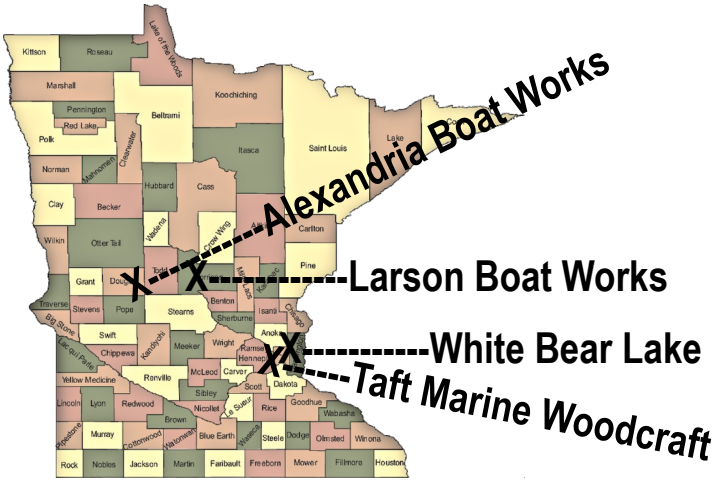
"...grants have allowed a small St. Paul-based nonprofit, Maritime Heritage Minnesota (MHM), to re-establish the discipline of underwater archaeology in Minnesota. Without this support, MHM could not have conducted its groundbreaking nautical archeological and maritime historical research."

~Steve Elliott, Former Minnesota Historical Society CEO and Director, January 2015

Introduction

Maritime Heritage Minnesota conducted the Minnesota Wooden Watercraft Analysis and 3D Scanning Project (MWWA) between January and June 2021. The purpose of the MWWA Project was to document, 3D scan, and conduct historical research of 4 Minnesota-produced watercraft. MHM chose watercraft constructed by the Alexandria Boat Works in Douglas County, Larson Boat Works in Morrison County, Taft Marine Woodcraft in Hennepin County, and a homebuild watercraft now located in Washington County.



Research Design and Methodology

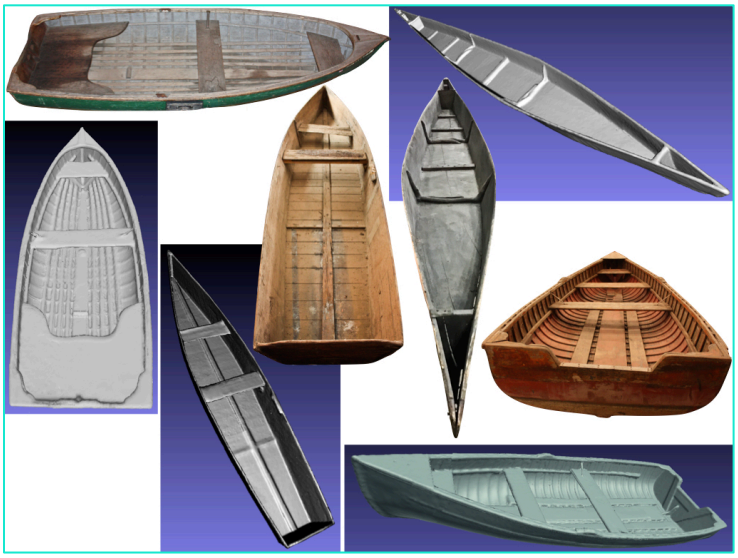
Watercraft are held in several Minnesota museums, historical societies, and collections - boats that were constructed in the state. Often the general public, scholars, and students are unaware of the significance of small and seemingly mundane historic vessels preserved in these collections. Drawing upon nautical archaeological and maritime historical knowledge based on fieldwork and research, MHM chose 4 small wooden watercraft specifically constructed to act as recreational vessels to investigate during the MWWA Project. These vessels met particular criteria: they were Minnesota-designed and built, they had a particular design, they are rare, and their significance to the maritime history of the state has not been widely recognized or understood. MHM has documented 3D scanned, measured, sketched, and photographed 4 vessels: Erick Erickson's Lady of the Lakes Outboard Motor Boat from Alexandria Boat Works in Alexandria on Lake Agnes, Paul Larson's Senior Fisherman's Choice from Larson Boat Works in Little Falls on the Mississippi River, Bob and Warren Taft's Ice Boat Kit *Green* Hornet from Taft Marine Woodcraft in Columbia Heights. and a Wooden Outboard Runabout Homebuild kit boat that may be from Taft or Luger Marine of Minneapolis.

The 3D scanning process - using hand-held scanners attached to iPads - is a tool MHM has utilized since late 2016. The files produced by the scanners were used to produce 3D models using mesh software. To date, MHM has documented 18 other Minnesota watercraft: the Big Swan Dugout Canoe, a Ramaley's Fisherman's Friend, Mille Lacs Indian Trading Post motorboat, a Joseph Dingle Boat Works outboard motorboat, a Cokato Boat Works outboard fishing boat, a chrome fiberglass Herter's Model St. Lawrence outboard motorboat, Tukantoiciya's Dakota Birch Bark Canoe, an Ojibwe Birch Bark Canoe, a Parker's Prairie Boat Works Duck Boat, Arthur Dyer's fast racing sailboat *Onawa*, Charles Ichabod Clark's narrow flat-bottomed planked boat named *The Constitution Old Ironsides*, a Fisherman's Friend model probably constructed by Moore Boat Works or Ramaley Boat Works, a small outboard motorboat probably designed and produced by E. Weston Farmer at the Wayzata Boat Building Company, Ray Thompson's row/outboard fishing boat Thompson #22 from Waseca, 2 Crona Craft Runabouts from Tonka Bay Boat Works, an All-American Runabout from Larson Boat Works, and Hugo's Boat Works Sportsman G16 Runabout[1].

Ramaley's Fisherman's Friend, Mille Lacs Indian Trading Post motorboat, Joseph Dingle Boat Works outboard motorboat, Cokato Boat Works outboard fishing boat, chrome fiberglass Herter's Model St. Lawrence outboard motorboat
(Merriman and Olson 2017)

Tukantoiciya's Dakota Birch Bark Canoe, Ojibwe Birch Bark Canoe, Parker's Prairie Boat Works Duck Boat, Arthur Dyer's sailboat *Onawa*
(Merriman and Olson 2018)

[1]See MHM's reports in the Minnesota Small Craft Series: *Big Swan Dugout Canoe: 3D Scanning and Radiocarbon Testing Project*. (2016), *Minnesota Small Craft Project* (2017), *Minnesota Purpose-Built Watercraft and 3D Scanning Project Report* (2018), *Minnesota Historic Fishing Boats Analysis and 3D Scanning Project Report* (2019), and the *Minnesota Historic Runabouts Analysis and 3D Scanning Project Report* (2020).



Charles Ichabod Clark's *The Constitution Old Ironsides*, Moore Boat Works or Ramaley Boat Works Fisherman's Friend, Wayzata Boat Building Company outboard motor boat, Thompson #22 from Waseca
(Merriman and Olson 2019)

2 Tonka Bay Boat Works Crona Craft Runabouts, Larson Boat Works All-American Runabout, Hugo's Boat Works Sportsman G16 Runabout
(Merriman and Olson 2020)

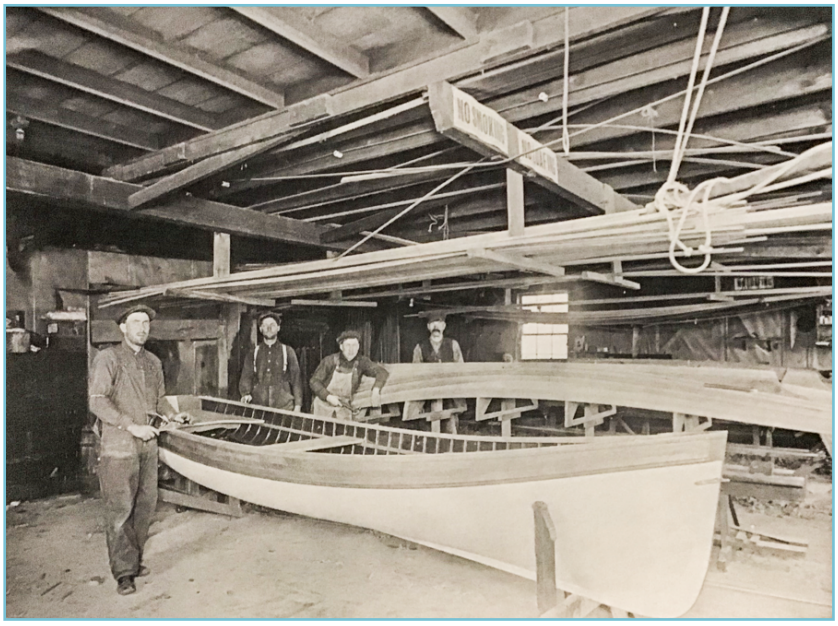
Minnesota Wooden Watercraft Analysis and 3D Scanning Project Results

Alexandria Boat Works Lady of the Lakes Model Outboard Motor Boat (ABW-LotL) Legacy of the Lakes Museum, Alexandria, MN

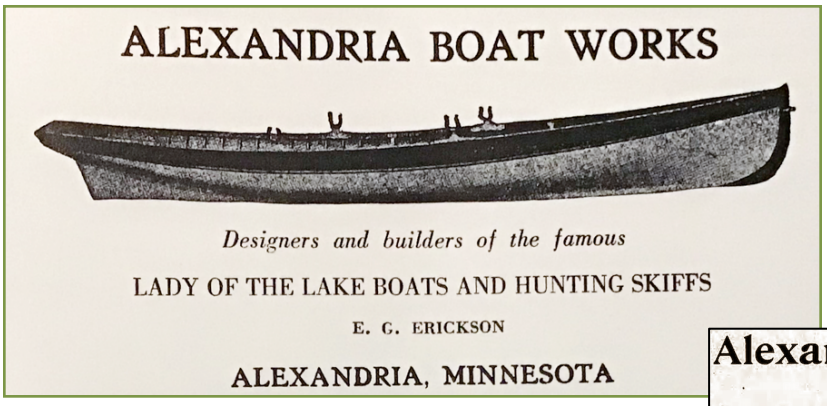
History

Alexandria Boat Works was officially founded in 1884 by Erick Erickson, *aka* 'Boat Erick', who began his life-long association with watercraft during his childhood, building model boats and small lapstrake vessels. During the early years of his enterprise, he primarily constructed lapstrake rowboats that were in great demand on the lakes around Alexandria in Douglas County. Boat Erick used several wood types in constructing his watercraft including cedar, cypress, redwood, white oak, mahogany. In 1902, Erickson developed the 'convex-concave' construction technique that eliminated the need for caulking a boat's seams. This carvel-type of construction for small strip boats allowed for the edges of the strakes to fit one into the next, and so on. Every season, 2-3 days of soaking would swell the boat's seams and the watercraft became water-tight. It must be noted that numerous small boat builders in the early 20th Century laid claim to

'inventing' the convex-concave construction style. By 1900, Boat Erick's full-time occupation was Boat Builder, although it seems ABW did not employ any other full-time workers; that situation likely changed over the winter months. Later records refer to Erickson as a 'Manufacturer' of 'Boats' working on his own account, that he had his 'own shop', and that he was a Boat Builder at Alexandria Boat Works As early as 1905, ABW boasted a line-up of models that included gas launches, hunting boats, sailboats and rowboats. In the first decades of business, Boat Erick operated ABW as a factory-direct service; watercraft were ordered over the phone or by mail using a catalog, or in-person at the ABW shop. Often the majority of ABW watercraft craftsmen were off-season farmers who constructed boats in the late Fall and Winter months in preparation for their sale/use in the Spring and Summer. When completed, boats were well-packed in burlap or wooden crates for delivery by train or truck (*Jamestown Weekly Alert* 1905; Minnesota State Census, 1905; Rhude ND; Speltz 1982, 44; US Federal Census 1900, 1910, 1920, 1930).

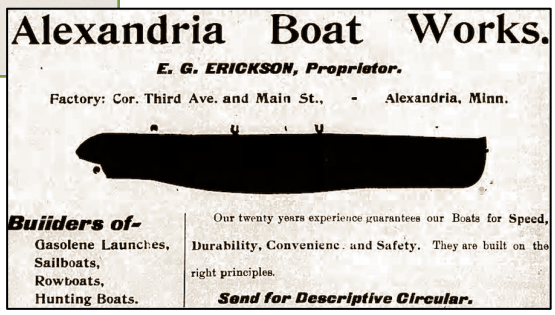


Alexandria Boat Works building exterior and completed boats outside. Workers constructing ABW watercraft inside the factory. Both photos prior to 1910 (Speltz 1982 42, 46).



Alexandria Boat Works catalog
(Speltz 1982, 41)

(*Jamestown Weekly Alert* 1905)



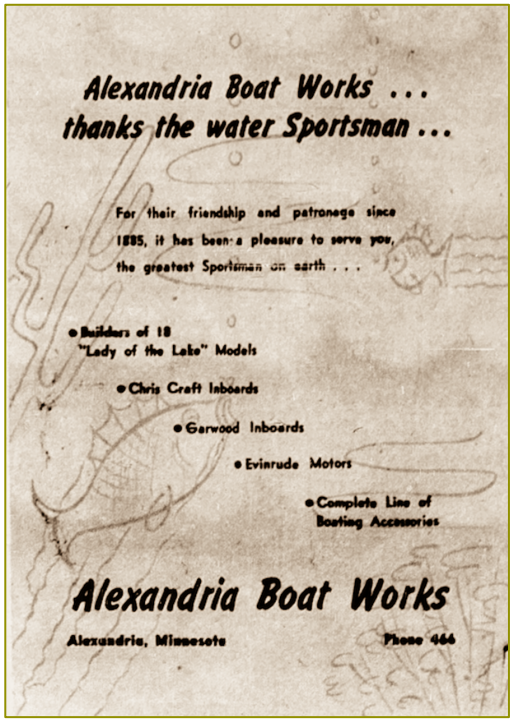
In the 1920s, Boat Erick developed and patented the underslung boat trailer that simplified boat launching and retrieval. Further, Erickson patented the first cloverleaf anchor and self-locking oarlocks. Also, learning from the application of trim tabs to both inboard and outboard motor boats, Boat Erick decided to extend the bottom planks of his watercraft beyond the transom to achieve the same effect. The longer planks created a better planing angle, and the heavier construction could support larger, heavier, faster outboard and inboard motors. Erickson called his construction development a 'speedboat planing apron'. By the late 1920s, Boat Erick had developed the 'Lady of the Lake' line of vessels, referred to as "The Thoroughbred of Outboard Crafts...Specially designed for speed, smartest lines, durability, plus safety, unleakable, firmly carefully and smoothly built. Easy to keep clean. Order now. Boats built to order, send specifications. Write for Folder...Alexandria Boat Works...Oldest Boat Manufacturers in Minnesota". In April 1929, Erickson and his son-in-law Arthur Larson represented ABW during the final organizational meeting of the Brainerd branch of the National Outboard Motor Association; they displayed and promoted their latest speed boat model (*Brainerd Daily Dispatch* 1929a; *Minneapolis Sunday Tribune* 1929a; Speltz 1982, 42-43).

(*Minneapolis Sunday Tribune* 1929a)

Erickson remained active in the business until his death in early January 1936; he was 69. Erick's wife Anna remained as part of the management team of the ABW and she was documented as the "boat factory's" owner in 1940; her son-in-law Arthur Larson

was the company's manager. Anna's son-in-law Clifford Movold and his son John [Jack], oversaw daily boat-building operations during the 1940s. The post-war boom years, along with improvements and developments in outboard motors, increased the demand for personal watercraft. In mid-1950, ABW was constructing 18 different 'Lady of the Lake' models of watercraft and the company sold Evinrude motors, Gar Wood and Chris Craft inboard boats, Feathercraft vessels, aluminum canoes by Grumman, and an array of fishing gear, boating accessories and sporting equipment. Anna died at 83 in early August 1951, having remained in the main office all those years[2] (*Minneapolis Sunday Tribune* 1950; Minnesota Department of Health 1936, 1951; Rhude ND; US Federal Census 1940a).

By 1952, it was reported the firm had constructed 15,250 watercraft since Boat Erick founded his company. The ABW officially celebrated its 70th Anniversary on May 1-2, 1954, with an open house and door prizes; a 12-foot Lady of the Lakes boat was the grand prize. By mid-1954, ABW was focused upon as one of "Minnesota's Famous Trademarks", touting a 5% export rate of the company's boats, as well as the fact that "fishermen and hunters throughout America know Alexandria boats are sturdy, dependable craft". Beyond the 'Lady of the Lake' models that included "hunting skiffs, runabouts, and speed boats", the ABW designed and constructed a "special craft" called the 'Leech Lake' "for use on big, rough bodies of water". In total, ABW's roster of boats for sale numbered 23 models, the company kept 20-30 boatbuilders busy, and its new (constructed in 1952) factory east of Alexandria at that time measured 30,000 square feet. Later in 1954, on September 16, John [Jack] purchased Alexandria Boat Works from his parents, Ruby and Clifford (*Minneapolis Sunday Tribune* 1954b; Minnesota Secretary of State 1954; *Picture Magazine* 1954, 21; Rhude ND; *St. Cloud Daily Times* 1954; Speltz 1982, 44; *Star Tribune* 1954).

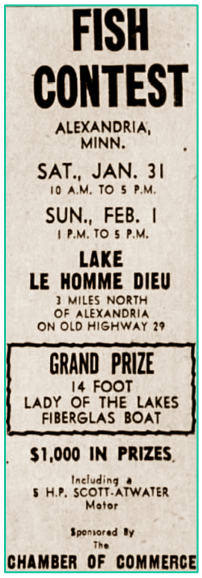


(*Minneapolis Sunday Tribune* 1950; *St. Cloud Daily Times* 1954)

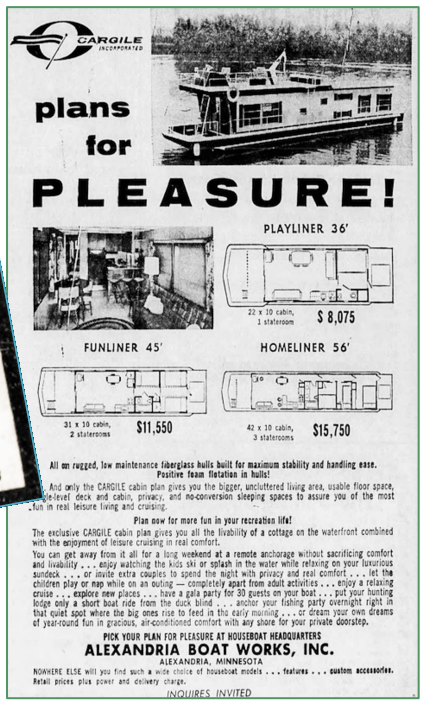
[2]Difference sources have reported the sale of ABW, Inc. in 1935 and 1941 to family members and outside interests; this information cannot be confirmed and has been discarded.

John [Jack] Movold determined in 1954 that Alexandria Boat Works would survive as a business entity if it discontinued the construction of wooden boats. The company exclusively became a dealer of other company's boats instead of manufacturing its own watercraft, although ABW became the northern states representative of Bowman Boats of Arkansas; the vessels were fabricated in Alexandria using fiberglass Goodyear hulls . The association was short-lived, but ABW applied seats, hardware, and wooden decks to the fiberglass hulls at a rate of 10 units per day. Between the years 1958-1962, ABW marketed and sold a series of 'Lady of the Lakes' utilities, cruisers, and a single runabout with different model numbers such as 304A, 305A, 306G, 315A, 306W, and 417A, along with the Duckboat, Scout, Portager, Cargo, and Sport models. These boats were constructed of aluminum, fiberglass, and surprisingly, wood. In the mid-1960s, ABW and Lady of the Lakes Sporting Goods was a retailer for Glastron fiberglass boats. The company was a significant presence at Minnesota boat shows promoting Glastron speedboats. By 1966, ABW was "the houseboat headquarters" for large Cargile, Inc., fiberglass houseboats that measured between 36 and 56 feet long. In 1967 ABW promoted the appearance of the "Batboat *Zam Pow*" at the Northwest Boats, Sports and Travel Show. ABW also retailed the Porta-Dock, a new easily installed and removed dock with wheels, beginning in 1968. The company expanded its interests into large winter sports equipment when it became a dealer of Scorpion snowmobiles. The following year, Sno-Jet snowmobiles - "better by design" - were sold through the ABW subsidiary North Central Sno-Jet; its vice-president was Mark Movold, another of Boat Erick's grandsons and John's [Jack] brother. Beginning in the early 1970s, ABW was selling dealerships for Mirro-Craft Aluminum Boats, urging interested investors to "sell the boat that sells itself". The Mirro-Craft line included canoes, runabouts, and fishing boats. By 1976, Mark Movold was the president of ABW, and the company was dissolved on February 1, 1989 (Fiberglassics ND-1, ND-2; *Minneapolis Star* 1969; *Minneapolis Sunday Tribune* 1957b; *Minneapolis Tribune* 1965, 1966, 1967b, 1968a-b, 1971, 1972, 1976; Minnesota Secretary of State 1989; Rhude ND; US Federal Census 1940b).

(*Minneapolis Sunday Tribune* 1959; *Minneapolis* Tribune, 1965, 1967b, 1971, 1972)



(*Minneapolis Sunday Tribune* 1959; *Minneapolis Tribune* 1966, 1967b, 1972)

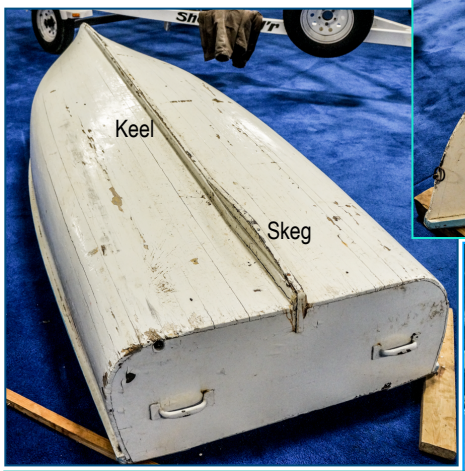


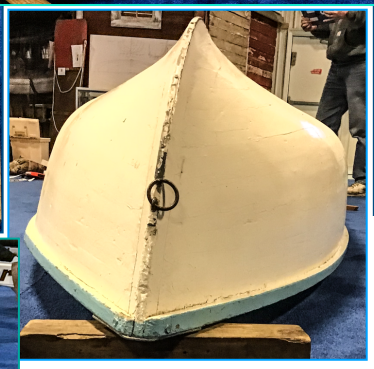
The 2 images below depict the Egloff Family's long-lived Alexandria Boat Works watercraft in the 1930s (Courtesy of Dave Egloff).

Description: Alexandria Boat Works Lady of the Lakes Model Outboard Motor Boat (ABW-LotL)

MHM documented the Alexandria Boat Works Lady of the Lakes Model Outboard Motor Boat (ABW-LotL) in 1 day of 3D scanning in January 2021. The ABW-LotL is 11.30 feet long, 4.75 feet in the beam, 4.30 feet at the transom, and with a 2.44-foot depth of hold. The stem consists of a triangular outer stempost that is curved and attached to the keel. A plain towing ring is attached to the stempost with a screw loop. The bow is topped with a steel bow casting that identifies the boat: "ALEXANDRIA BOAT WKS. ALEXANDRIA MINN". The square transom is comprised of wide planks with a thin gunwale. It is not shaped to carry an outboard motor, but the 'motor safety plate' on the inside transom - a rectangular metal piece that enhances the transom's strength when the motor is on the boat - was cast with the words "LADY OF THE LAKES MOTOR SAFETY PLATE". On both sides of the plate, rectangular vertical braces and on the centerline, a sturdy knee adds strength to the stern. Two metal carrying handles are attached on port and starboard on the transom that rakes aft. At the stern, the keel protrudes through the bottom of the hull, is square in cross-section, and has a skeg attached to it. A metal fitting is attached to the skeg and the transom, providing strength, support, and protection to the keel. The hull is comprised of slat frames and slat strakes construction, and is carvel-built; the strakes are set end-to-end making a smooth hull.

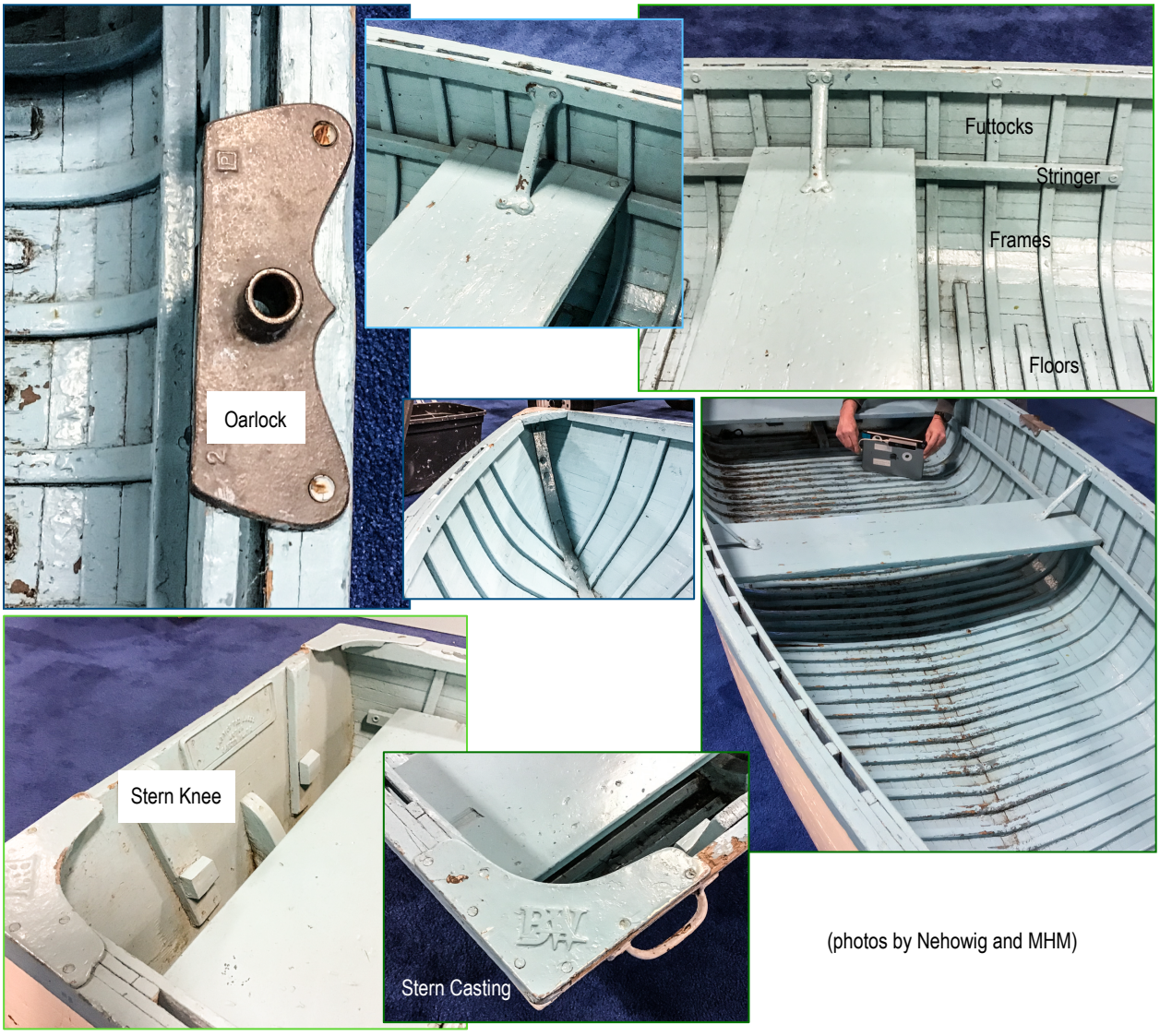
MHM maritime historians and underwater archaeologists Ann Merriman and Christopher Olson 3D scanning the ABW-LotL with the assistance of MHM volunteer Kelly Nehowig (photos by Nehowig and MHM).



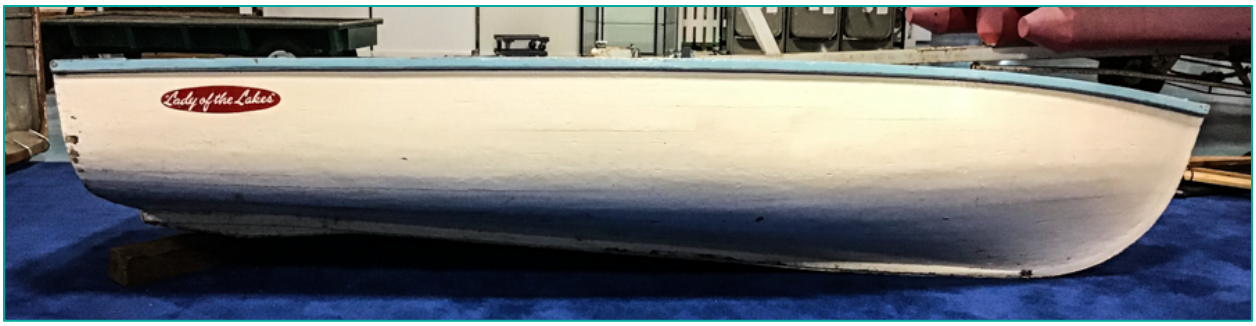


(photos by Nehowig and MHM)

The slat futtocks are 'sandwiched' between the outer rubrail and inner stringer to comprise the gunwale, and there is no caprail. Every other slat floor does not extend to or beyond the turn of the bilge, however. The vessel has a flat bottom aft and amidships that forms a V-hull at the bow. The port and starboard quarters have very slight tumblehome, where the hull narrows from the waterline to the gunwale. Two sturdy stringers are attached to the inner hull, half-way up the side, extending from the stern to forward of amidships. They provide support to the 2 benches that are located amidships and aft. Metal braces reinforce the amidships bench on its upper face. Two sturdy oarlock castings are attached to the gunwale for use by the amidships rower. Both stern quarters have corner castings with a stylized "ABW" logo formed into them. The entire hull is held together with slot-head wood screws and the occasional bolt. The inner hull is painted light blue and the outer hull is white; the "Lady of the Lake" logo is painted inside a red circle on both quarters. MHM contends the ABW-LotL was constructed around 1930, based on the presence of slot-head woodscrews and the complete absence of Phillips head screws, the type that were widely used beginning in 1936. The boat is in fantastic condition and will remain so if kept in her current humidity-controlled environment and if no undue stress is placed on the hull; she should remain flat on her keel, supported by an external frame.

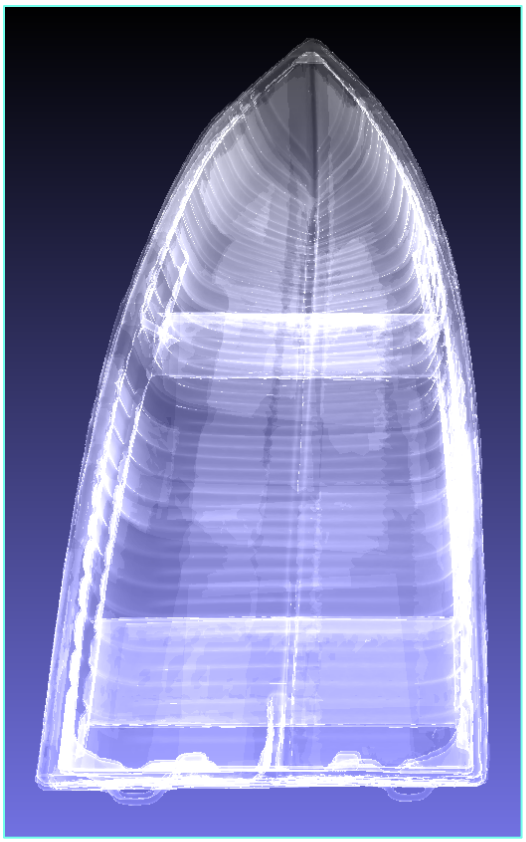


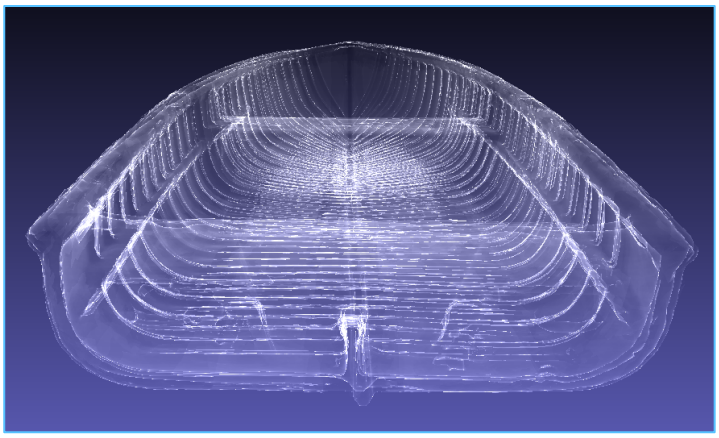
(photos by Nehowig and MHM)

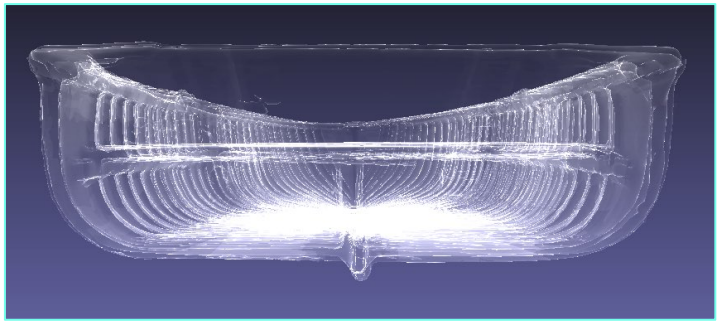


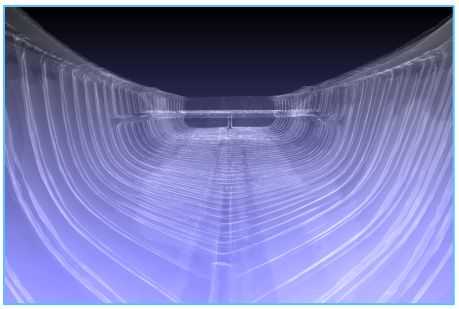
(photos by Nehowig and MHM)

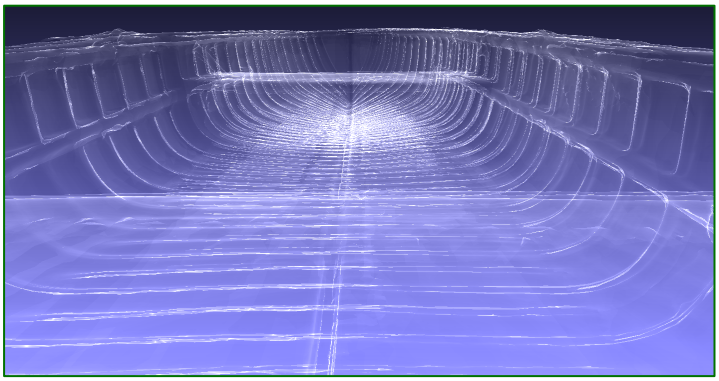
3D model of ABW-LotL (MHM)

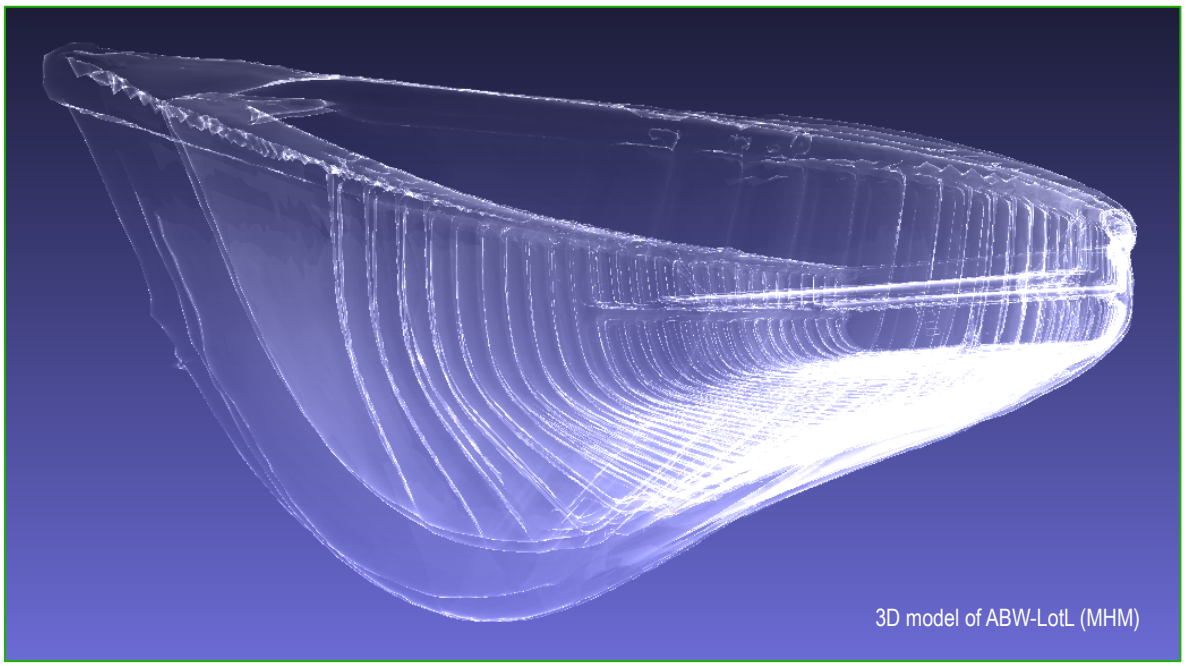




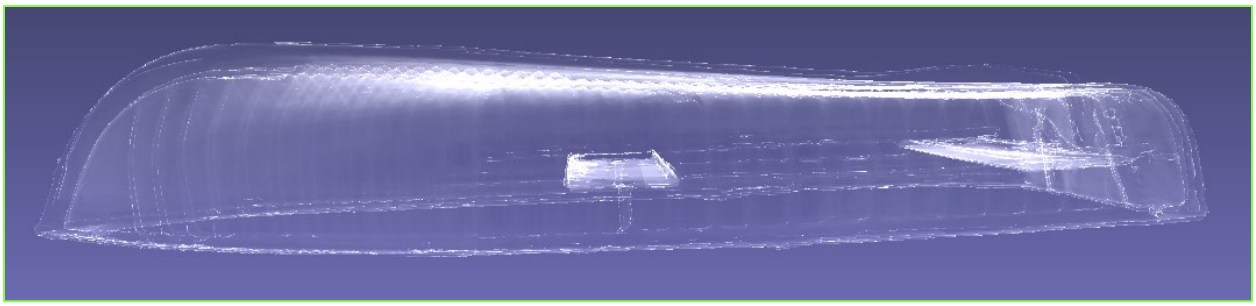


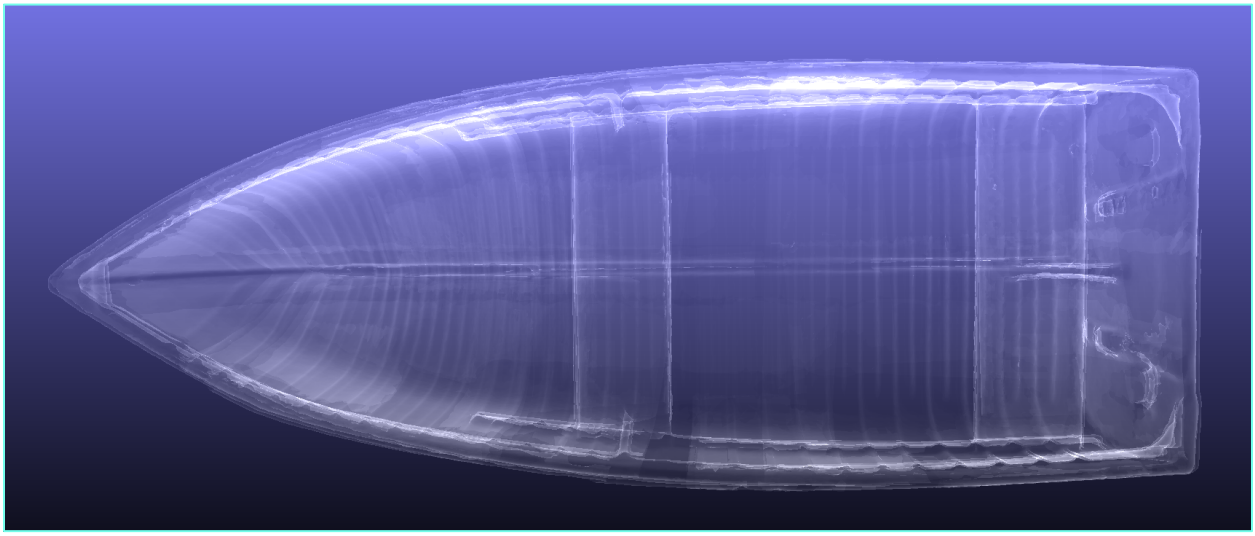






3D model of ABW-LotL (MHM)

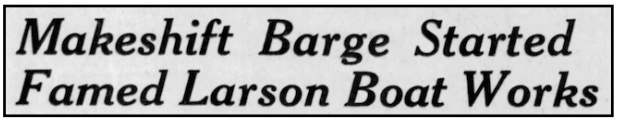




3D model of ABW-LotL (MHM)

Larson Boat Works Senior Fisherman's Choice (LBW-SFC)
Silverwood Park, St. Anthony, MN

History


Makeshift Barge Started
Famed Larson Boat Works

(*Minneapolis Sunday Tribune* 1947)

In 1905, at age 11, Paul Larson designed and built his own scow-ended wooden 10-foot fishing boat in Little Falls, Minnesota. In 1913, at age 19, Larson designed and constructed a double-ended 2-person duck boat for personal use - and started a boat-building business in his spare time. What MHM finds important - and interesting - about this endeavor is the fact that Larson created design plans prior to the duck boat's manufacture. This vessel was 14.00 feet long, 3.00 feet in the beam with a 12.00-inch depth of hold, and was constructed of white pine strip planking with white oak frames. Larson steamed and bent the frames into their proper shape on his own. The production of this small watercraft resulted in his first orders for boats by local hunters who recognized his talent. He erected his first boat works on a piece of family-owned land on the Mississippi River and he incorporated Larson Boat Works in 1916. Assisted by the development of small outboard motors, the number of small wooden boats produced by Larson for Minnesotans around Little Falls steadily increased - and they were constructed to accommodate outboards. In 1922, Larson expanded his business by becoming the first Minnesota dealer of Johnson outboard motors. This partnership directly affected Larson's boat designs – as Johnson motors gained power, resulting in increased speed – Larson introduced racing boats to their line of available watercraft for purchase. Larson advertised "clinker rowboats and strip built (smooth skin) boats for outboard motors. Description and prices on request. Paul G. Larson, Little Falls, Minnesota". With increased business in the mid-1920s, Roy Larson, Paul's brother, joined the company to oversee outboard motor sales and their service. Also, Paul became known for his boat racing ability and he won several trophies for piloting the "boat of Minnetonka fame" *Comet* to victories at various Minnesota lakes.[3] By mid-1929, the variety of wooden boat types available for sale by Larson included stepless hydroplanes and one step hydroplanes that were intentionally designed to accommodate all sizes and brands of outboard motors. Additionally, outboard and row boats in 14.00, 16.00, and 18.00-foot lengths made from cedar strip strakes with white oak frames. The Larson motto, "Beauty, strength and *safety* in every Larson Boat" was featured in their advertisements (*Brainerd Daily Dispatch* 1923, 1929b; *Minneapolis Sunday Tribune* 1929b; Plueddeman 1988, 123; Sommers 2000, 8-11).

BOATS FOR SALE—Clinker rowboats and strip built (smooth skin) boats for outboard motors. Description and prices on request. Paul G. Larson, Little Falls, Minnesota. 6653-289t6

(*Brainerd Daily Dispatch* 1923)

An indicator of the popularity and significance of boating - and fishing - is shown by the scheduled "Larson Boat Works Program" at 8 am on WRHM Radio on July 2 and July 4, 1929. The following month, during a race at Red Wing, Paul Larson was involved in a serious collision, and even though Larson was technically in critical condition, he retained his composure and piloted his damaged boat - *Spirit of 770* - to safety. A large

[3]Paul Larson won the Labor Day Regatta at Lake Minnetonka in 1928, in addition to the Class C and the 'Free For All' races at Lum Park at Brainerd in 1929, and other similar races (*Brainerd Daily Dispatch* 1929a-b; *Minneapolis Morning Tribune* 1929).

wooden piece went through his shoulder and imbedded there, protruding out of both sides of his body. Internally, a smaller 'splinter' and a metal screw lodged themselves between his lung and a bone in his shoulder, requiring surgery for their safe removal. Larson Boat Works also provided watercraft for 'motor boat marathon races' that pit their own vessels representing different towns against each other. In marathon races, the object of the event was to keep the boats running constantly for 2 or more days. In the mid-1930s, Larson Boat Works, produced watercraft for vacation resorts, special order vessels for specific buyers, and “wooden boats for the masses”. The types constructed included fishing boats, utilities, and runabouts that could be outfitted with windscreens, running lights, and what was termed “fancy upholstering”. Additionally, utilitarian watercraft such as duck boats - both new and used - were offered for sale at the Boat Works for as little as $7.00; offered were both all-wood and canvas covered models (*Brainerd Daily Dispatch* 1929c; *Little Falls Daily Transcript* 1929; *Minneapolis Star* 1929a-b; *Minneapolis Sunday Tribune* 1934; *St. Cloud Daily Times and Daily Journal-Press* 1932; Sommers 2000, 16). The LBW-SFC falls into the 'wooden boats for the masses' category.

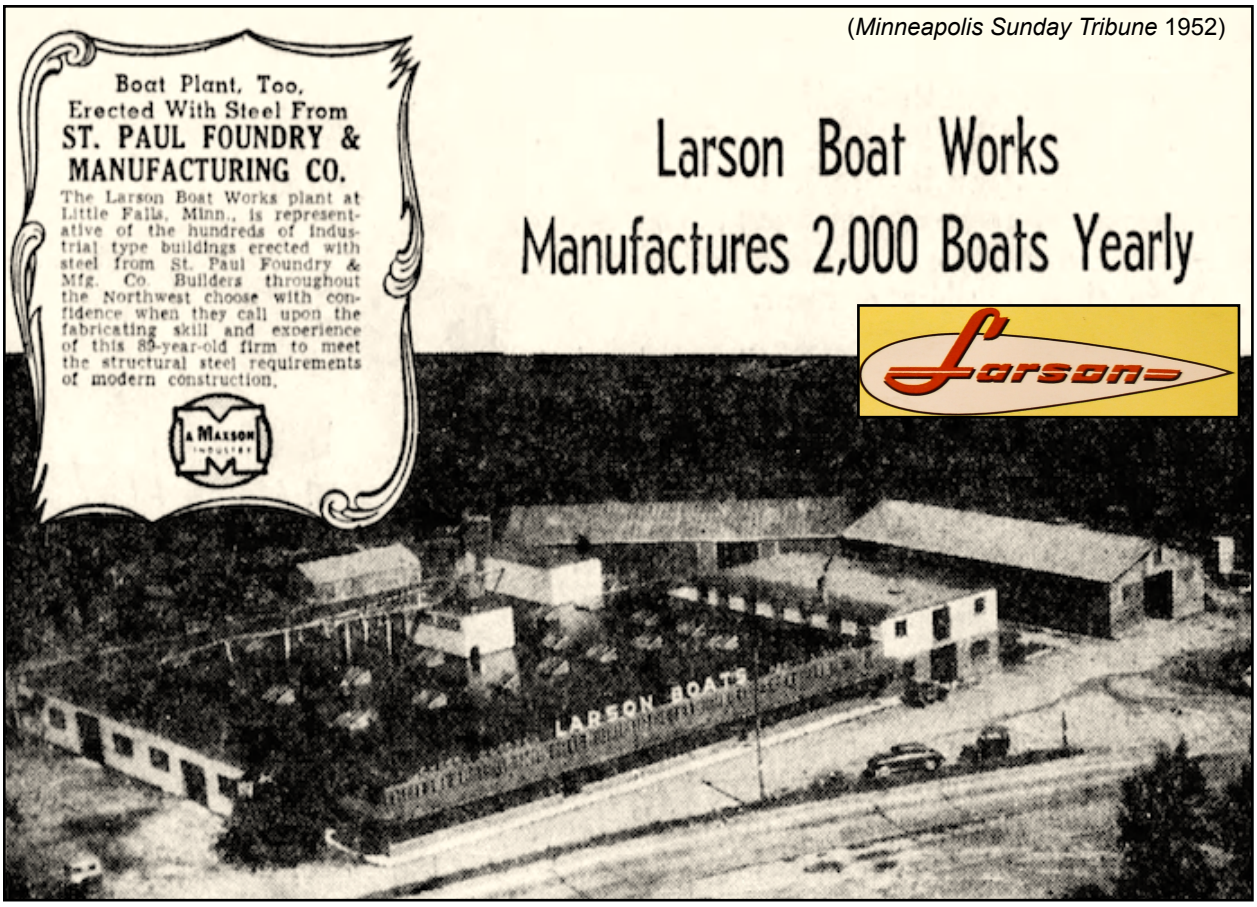
In August 1936, Larson Boat Works purchased a section of land - for $300.00 - from the City of Little Falls for an addition to their building. The new section would be a warehouse that measured 30.00 feet by 90.00 feet. The business expansion was due to the high demand for the company's watercraft; 20 men were kept working full time during the summer and 13 during the winter months. With the additional space available in 1938, Larson introduced the wooden Falls Flyer, “a fast, sleek, sporty outboard runabout with as many contours as cedar strips and canvas covering would allow”. The Falls Flyer design was referred to as ‘futuristic’, and Larson's patent application characterized it as a "new, original and ornamental Design for Boats". Larson named the vessel to honor Little Falls native aviator Charles Lindbergh. The company's momentum was brought to a halt on December 13, 1949 when a fire broke out in the main warehouse building where Larson boats were constructed; the fire was fueled by varnish, paint, and wood. The fire spread from the main building to 2 others and all 3 burned to the ground; a night watchman also perished. Paul Larson reported that 400 boats were destroyed by the fire. Larson Boat Works was back in production by Autumn 1950, and the grand opening was celebrated on April 26, 1951. The new boat buildings were larger and better equipped than the destroyed facilities. In the early 1950s, the Falls Flyer design underwent changes that

(*Minneapolis Star-Journal* 1940b)

Man Killed, Flames Level Boat Works

Larson Plant Blaze Starts During Night

(*Winona Republican Herald* 1949)



(*Minneapolis Sunday Tribune* 1952)

retained speed, especially when the hull was manufactured using fiberglass beginning in 1954. In preparation for manufacturing entirely molded fiberglass watercraft, in 1953 Larson offered their wooden-hulled boats with a protective skin of fiberglass if their customers ordered that modification to their vessel. By 1956-1957, Paul Larson understood that the prosperity of his company - like other wooden boat-building firms - depended on embracing fiberglass and aluminum boat construction after World War II. The watercraft design that would be "Larson's ticket to the boating boom's biggest batch of buyers was introduced in 1956 and named the All American" - a 16-foot long fiberglass runabout with a wooden deck and interior (*Brainerd Daily Dispatch* 1949; Geiger 2009, 1-4; Hunn 2006, 84-85; *Minneapolis Sunday Tribune* 1952; *St. Cloud Daily Times* 1936, 1951; Sommers 2000, 24; *Winona Republican Herald* 1949). Documentation of the LBW-SFC, before she rots completely, is of even more importance due to her rarity; Larson ceased construction of wooden boats after the fire.

In regards to Larson Boat Works, the company was sold to Brunswick Corporation in 1960, joining the line-up of Owens Yachts and Cutter Boats that were produced by the company. By 1963, Brunswick's production of Larson watercraft out of Alliance, Ohio, was not successful. A group from the Little Falls business community, with Earl Geiger as the negotiator, bought Larson Boats back from Brunswick - and with it, production in Little Falls. In 1966, Larson Industries purchased Glasspar Boat Company of California, the C.A. Lund Company of Minneapolis, and Northland Skis[4] of St. Paul. The next year,

[4]Northland Hockey Sticks, a subsidiary of Northland Skis, controlled 90% of hockey stick production and sales in the United States. Eighty percent of NHL players used Northland's sticks, and 450 players ordered custom hockey sticks from the company (Geiger 2009, 7).

Larson Industries acquired Rolite, Inc. travel trailers, and that year, sales were reported to be $31 million. As the decades moved on, Larson Industries went bankrupt, was purchased by a few other companies, and left Minnesota. In 2019, the Larson Boat Group was purchased by Polaris, Inc., of Roseau, Minnesota, but watercraft production is taking place in Indiana (Geiger 2009, 1-8; *Boating Industry* 2019).

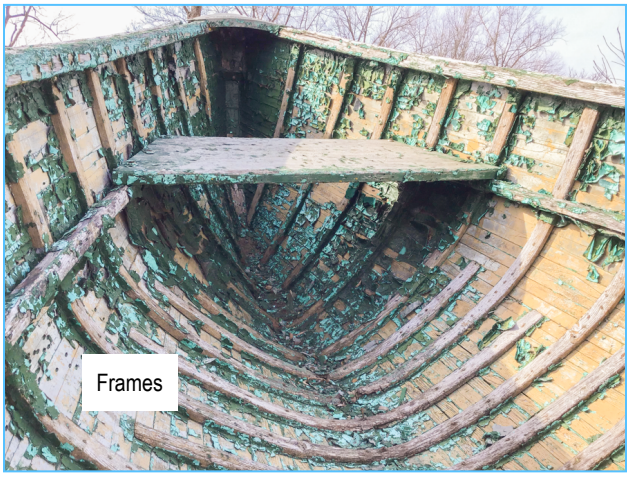
Description: Larson Boat Works Senior Fisherman's Choice (LBW-SFC)

MHM documented the Larson Boat Works Senior Fisherman's Choice (LBW-SFC) during 1 day of 3D scanning in March 2021 at Silverwood Park in St. Anthony. The watercraft is one component of an outdoor 'sculpture' open to the elements in Silverwood Park in St. Anthony, MN[5]. The LBW-SFC is 15.50 feet long, 4.25 feet in the beam, 3.00 feet at the transom, and with a 1.25-foot depth of hold. The stem consists of a triangular outer stempost that is curved and attached to the keel. A plain towing ring is attached to the stempost with a metal loop and strap. The bow is topped with a stainless steel - or more likely from its appearance - aluminum bow casting that identifies the boat: "Larson BOAT WORKS LITTLE FALLS MINN." Remnants of white and bluish paint is found on the casting, and the tip of it is broken off. The square transom is comprised of 2 wide planks that is subtlety shaped to carry an outboard motor, and a thin rectangular metal motor board is bent over the transom to reinforce the wood and deal with the weight of an outboard motor. A sturdy wooden motor board comprised of 2 pieces is attached to the inside transom, and a thick knee provided strength at the stern, set between the motor board sections. At the stern, the keel protrudes through the bottom of the hull, is square in cross-section, and has a substantial skeg attached to it. The hull is comprised of slat frames and slat strakes construction, and is carvel-built; the strakes are set end-to-end making a smooth hull. A substantial splashrail extends the entire length of the outer hull on both port and starboard.

[5]The other components of the wooden 'sculpture' are a Gar Wood Runabout, a Thompson Runabout, and a Hugo's Boat Works Sportsman G-16 Runabout.

(photos by MHM)

The slat futtocks are 'sandwiched' between the outer rubrail and inner stringer to comprise the gunwale, and there is no caprail. Every other slat floor does not extend to beyond the turn of the bilge, however. When constructed, the LBW-SFCI had a flat bottom aft and amidships, with a V-hull at the bow. However, the stress placed on this rare wooden boat by sitting on a frame in the elements for years has caused the bottom of the hull to deform at the frame braces and sag heavily at the stern, and lean to starboard. Two sturdy stringers are attached to the inner hull, half-way up the side, extending from the stern to the bow. The stringers provide support to the 4 benches ; the amidships aft bench is nearly destroyed. Metal braces reinforce both amidships benches on their upper face. Four sturdy oarlock castings are attached to the gunwale for use by both amidships rowers. Both stern quarters have corner castings with a cursive "L" logo formed into them. The entire hull is held together with slot-head wood screws. The inner hull has layers of different shades of green, and the outer hull has fragments of white paint. MHM contends the LBW-SFC was constructed around 1935, based on the presence of slot-head woodscrews and the complete absence of Phillips head screws, the type that were widely used beginning in 1936. Further, pictorial evidence of a 1942 LBW-SFC model shows the evolution of the transom into a stern that could support a larger outboard motor. Therefore, MHM contends LBW-SFC is from the mid-1930s. Larson Boat Works Senior Fisherman's Choice is in a constantly deteriorating condition.

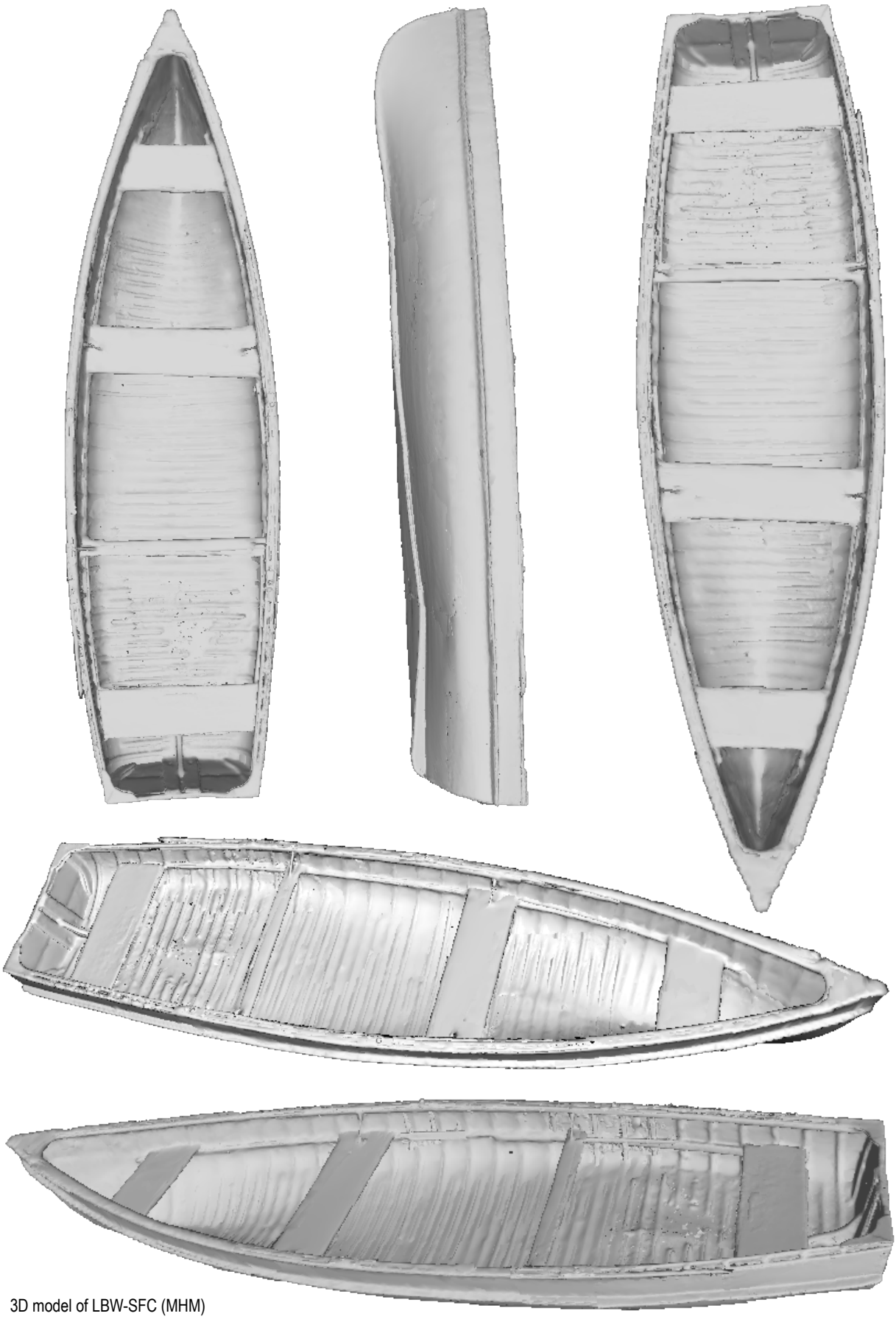


(photos by MHM)

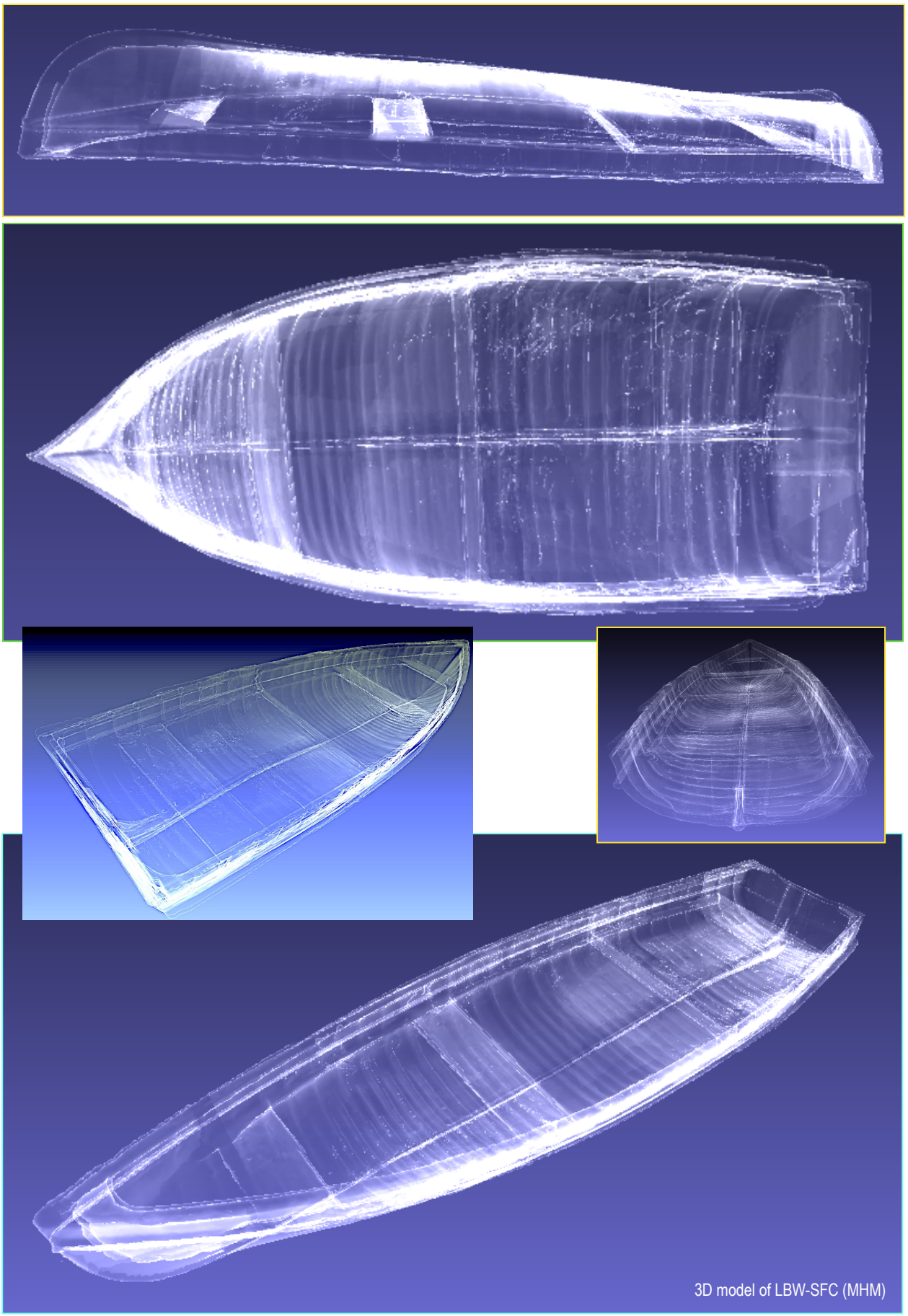
Oarlocks

(photos by MHM)

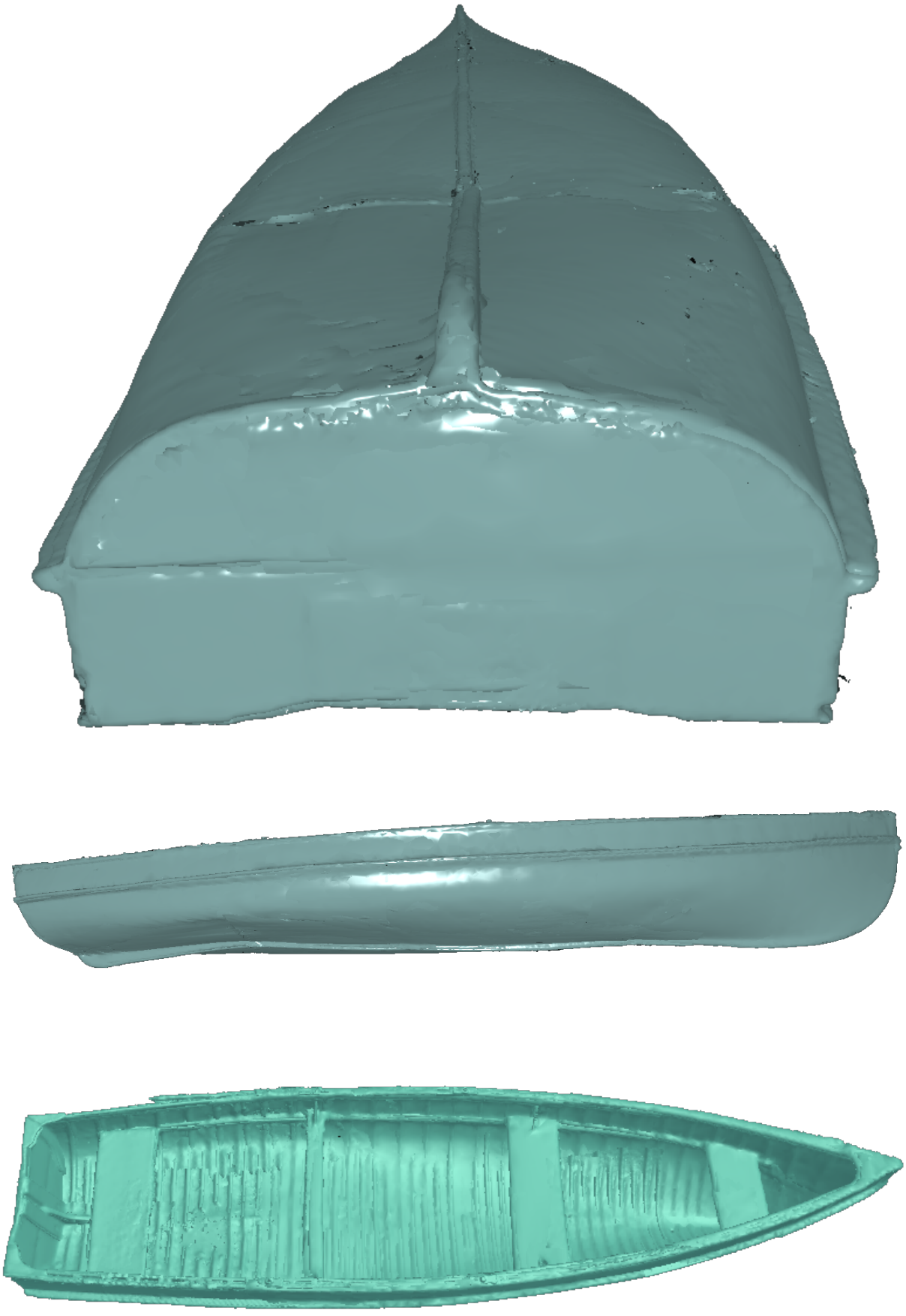
Stern Castings - Note the Starboard Casting to the right has broken since MHM first photographed the boat in 2020



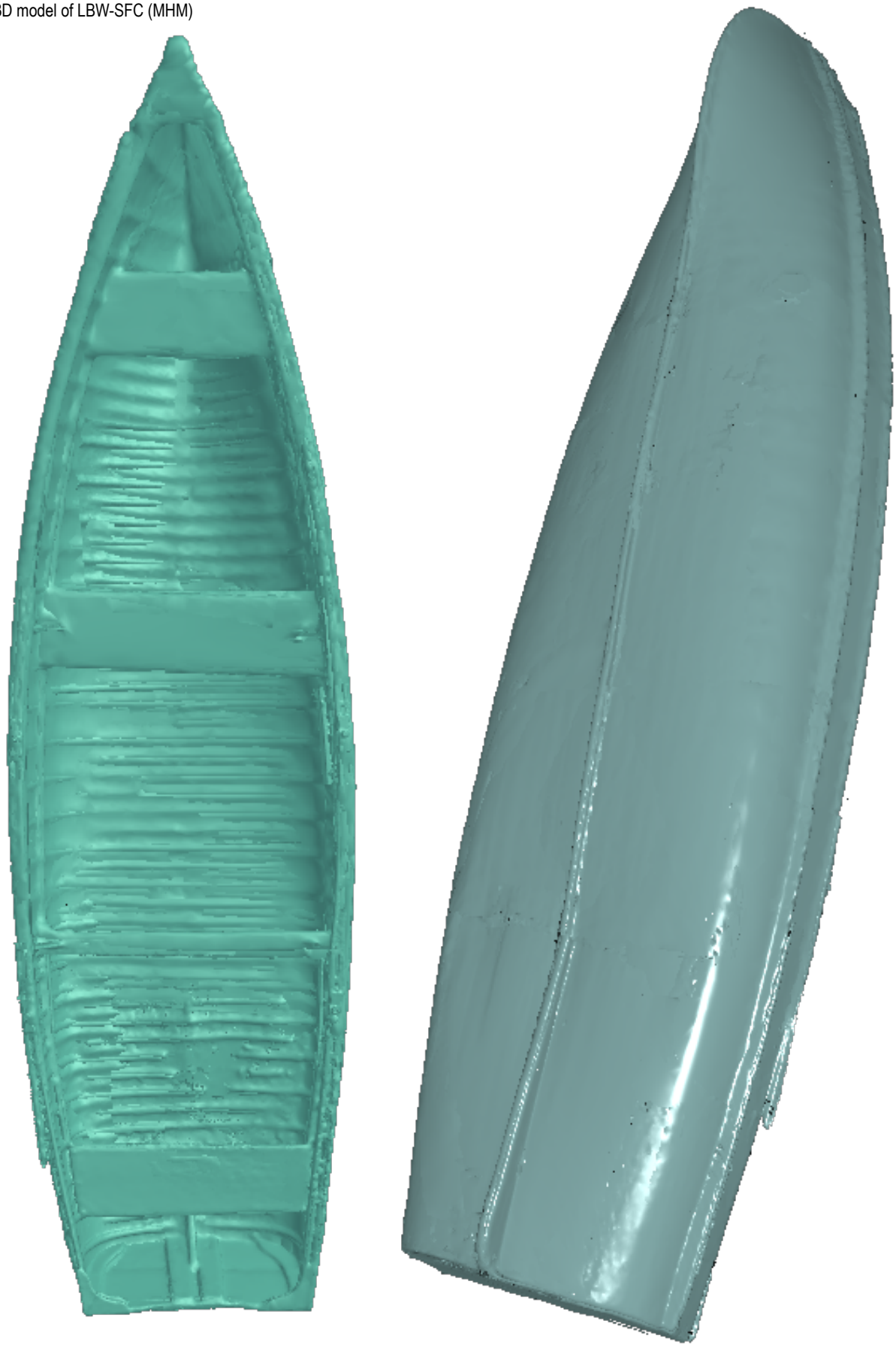
3D model of LBW-SFC (MHM)


3D model of LBW-SFC (MHM)

3D model of LBW-SFC (MHM)



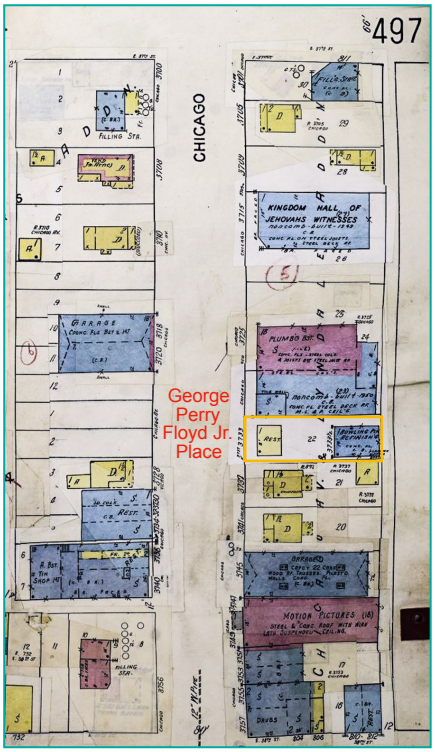
3D model of LBW-SFC (MHM)



Marine Woodcraft Company Kit *Green Hornet* Ice Boat (GHIB)
Minnesota Historical Society, St. Paul, MN

History

Brothers Robert and Warren Taft founded Taft Marine Woodcraft Company in 1937, located in south Minneapolis on Chicago Avenue.[6] Sometime in the 1940s, the Taft factory - 30,000 square feet in size - moved to Columbia Heights in Anoka County. In 1960, the company expanded their endeavors to Annandale in Wright County, where their 100 foot by 200 foot Taft Marine Plastic Craft factory would produce fiberglass canoes; easy access to railcars would assist TMW to cheaply ship their products to consumers. Pioneers in the boat-building industry, the Tafts not only sold boat plans to the 'do-it-yourself' watercraft builder, they produced pre-cut wooden pieces bundled as kits - a "package deal". Taft Marine Woodcraft quickly built up a reputation for manufacturing high quality kits produced by master craftsmen that utilized the best materials on offer. Further, stringent quality control procedures that included pre-fitting the kit parts to insure their compatibility, guaranteed success on the other end of the process; customers fabricated their own watercraft. Taft quickly developed several models of plywood boat kits, and the factory would also re-canvas and repair their products. The Taft brothers marketed their products at promotional shows - like the Northwest Sportsmen's Show - to expose the public to completed kit boats with "criss-cross lamination" that meant "you can't rip the bottom from a Taft molded boat". Post-World War II, the demand for inexpensive personal watercraft was extremely high, and hundreds of boat-building companies were established in the US; many did not survive more than a few years. However, Taft Marine Watercraft was not one of these failed businesses; Taft's business model proved to be sustainable and popular. For example, the company produced 400 boat kits - primarily small runabouts - in 1947 (*Minneapolis Star* 1956a; *Minneapolis Star-Journal* 1940a, 1941; *St. Cloud Daily Times* 1960; Wangstad 2015, 16).

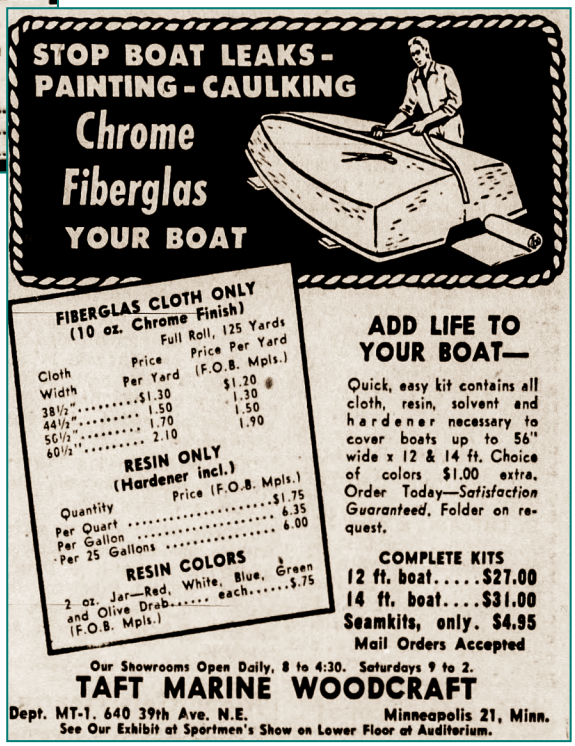


The location of the first Taft Marine Woodcraft Factory is outlined in orange (Sanborn Map Company 1930, 1951, 497).

Beginning in the 1950s, as Taft kits were developed for the DIY-er who wanted larger and heavier boats that were designed for faster speeds and heavier loads. To assist the boat-builder, and MHM assumes for safety purposes, the company's craftsmen constructed the internal framing of the kits that were then sent to customers for finishing. Utility, runabout, and cruiser kits included the pre-built frames, and were described as having "sturdy oak construction, finest quality marine plywood, ready build

[6]The Taft Marine Woodcraft factory was located at the back of the lot, with alley access. By 1951, a restaurant building occupied the front section of the lot on Chicago Avenue, and a bowling pin refinishing company had moved into the previous Taft building. An additional address of 3733 1/2 Chicago Avenue was attached to the bowling pin company (Sanborn Map Company 1930, 1951, 497). Today 'Smoke In The Pit' bbq restaurant faces Chicago Avenue, and this block of the avenue is also known as George Perry Floyd Jr. Place.

frames and parts, AP Galvanized Screws and Marine Glue included, simple illustrated instructions included". Several boat and trade shows throughout the 1950s aided Taft in continually touting their boat kits in public appearances like the Wards Fisherman's Show in May 1954; Robert Taft even assembled one of his boats as a demonstration to prove how quickly and easily the watercraft could be constructed. Also in May 1954, Taft began offering a "Fibre Glass Complete Kit" for those who wished to further waterproof their boats. The following year, Taft offered a kit to "Stop Boat Leaks - Painting - Caulking - Chrome FiberglasYour Boat"; 'chrome fiberglass' was a type of fiberglass or a manufacturing process that was first offered by Minnesota company Herter's (Merriman and Olson 2017, 57-58; *Minneapolis Star* 1954a-b, 1955b; *Minneapolis Sunday Tribune* 1953).



(*Minneapolis Star* 1955b; *Minneapolis Sunday Tribune* 1953, 1954a; *Sports Afield* 1955, 107; Taft Marine Woodcraft 1950s)

In 1956, TMW had a target of producing 11,000 boat kits for that year, and the company was looking to expand their operations. Taft offered not only an 18 foot cruiser, 12 and 14 foot runabouts, and 8 foot pram kits for sale, but the company manufactured 5 ply molded water skis that came pre-made, except the consumer would attach the foot harnesses and paint the wood. In 2 months, Taft considered itself "the Water Ski Headquarters [with] full kits to tow ropes, harnesses, floats, life jackets". One selling point for Taft kits was touted to be that "their product is guaranteed against a common ailment of the homemade boat business - building a boat in a basement and later finding it's too big to get outside without moving the house". By mid July 1956, Taft's marketing touted their kits as being for the "do-it-yourself navigator, in sizes from 12 to 22 feet, and sends them all over the world". In regards to community relations, the "Taft Marine" kid's baseball team won and lost against the teams from "Chet's" and "Pete and Sarah's" (*Minneapolis Star* 1956a-c; *Minneapolis Sunday Tribune* 1956a-b).

(*Minneapolis Sunday Tribune* 1956a-b)

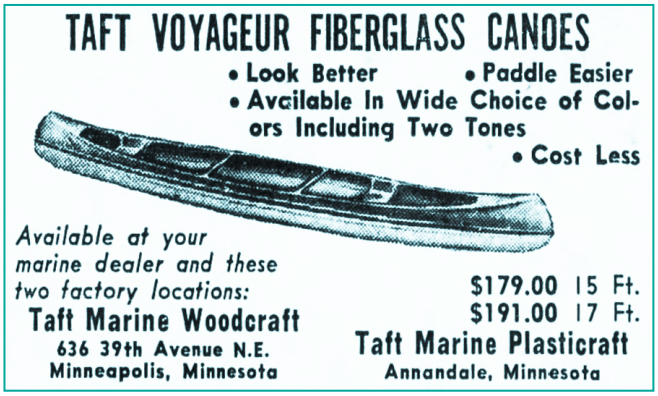
It is noteworthy that Taft Marine Woodcraft's first inboard boat kit was produced in 1957. The kits came with a pre-fabricated frame to insure successful at-home construction, and were designed to accommodate Grey Marine engines. Twin Cities retailers such as Lucky Marine of Hopkins promoted Taft kits for sale alongside other Minnesota boat manufacturers including Weere's Pontoons, Tonka Craft, and Crestliner, as well as Cadillac, Glaspar, Evinrude motors, and Gator's trailers. Over the next few years. TMW's business grew and grew, with Bob Taft being quoted as saying "Our new ski boat is the hottest one we've ever had", and a new 17-foot offshore cruiser kit was on offer. Further, by 1960, Taft had hit the 60,000 kits sold landmark, in their 23rd year of business, and the company had over 2 dozen boat kit designs for sale. Once the aforementioned Taft Marine Plastic Craft factory was operating in the early 1960s, Taft touted their increased number of boat kit types and designs at venues such as Apache Plaza Shopping Center. Taft displayed catamarans, jets, sailboats, hydrofoils, and what

they called 'flying boats'. The Taft Flying Boat literally was a lawn chair attached to a wooden frame on top of pontoons that was pulled by a boat - and it had a single helicopter rotor - a "rotary wing". Taft enticed its customers with the question:

Like to Fly? Try Building and Flying the Taft Flying Boat

(*Boy's Life* 1959, 79; *Minneapolis Sunday Tribune* 1957a; *Popular Science* 1967, 187; *Snipe Bulletin* 1966, 9; Taft Marine Woodcraft 1964)

Additionally, Taft also offered the 14-foot Air Boat and a Snow Sled that came with a 125 HP engine and propellor; contrast these vessels with the 12-foot hunter that was basically a plywood kayak. The Annandale Plastic Craft factory produced 'regular' and square stern fiberglass Voyageur model canoes in 15 and 17 foot sizes. Taft also sold a sailboat conversion kit for the 17-foot Voyageur; people could turn their canoe into "a sporty sail boat". Finally, Taft Ice Boats appear in the company's vessel line-up in January 1964. TMW not only offered "a popular DN Ice Yacht" kit, but they could be purchased pre-built, and they came with Dacron sails (*Minneapolis Morning Tribune* 1962, 1963a, 1964c *Minneapolis Star* 1957a, 1962, 1964; *Picture Magazine* 1959, 26; *St. Cloud Daily Times* 1960; Taft Marine Woodcraft 1964; Wangstad 2015, 16-17.)

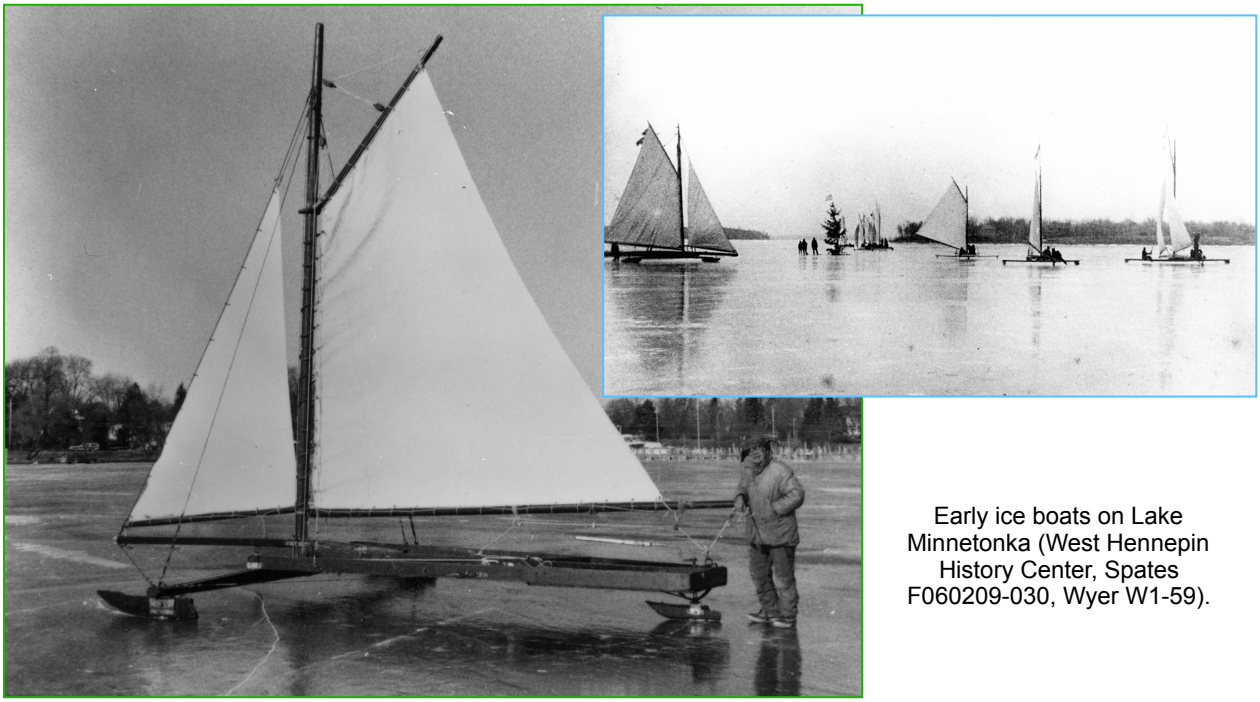


(*Field and Stream* 1969, 139; *Minneapolis Morning Tribune* 1964c; *Minneapolis Star* 1964; *Popular Mechanics* 1970, 61)

Ice boating, or ice yachting, in the United States began on the Hudson River in early 1871, an import from The Netherlands. Throughout the 1870s, fast ice boats on the East Coast made the news in Minnesota, particularly when speed records were broken. In March 1874, a Hudson River ice boat recorded a 31-second mile. The earliest mention of a Minnesota ice boat that could be located was a brief mention in November 1874: "C.B. Loveless was out on the lake this morning sailing in his ice-boat". The next month, "enterprising parties at Lake Calhoun [Bde Maka Ska][7] have, in consideration of the splendid condition of the ice this winter, made an ice-boat capable of carrying about five persons, and although the runners were in imperfect order, at a recent test, it raveled two and three-quarter miles in four minutes". Another claim of amazing speed came from E.J. Allen of Watertown, Dakota Territory, and his ice yacht *Lady of the Lake*. Allen was sailing on Lake Kampeska when a blizzard came up; he and his boat went 6 miles in 6 minutes (*Minneapolis Daily Tribune* 1871; *Minneapolis Tribune* 1874a-b, 1882; *Worthington Advance* 1874).

[7]Lake Calhoun has been restored it its original name, Bde Maka Ska. When not directly quoting a person, MHM will use Bde Maka Ska when referring to that body of water.

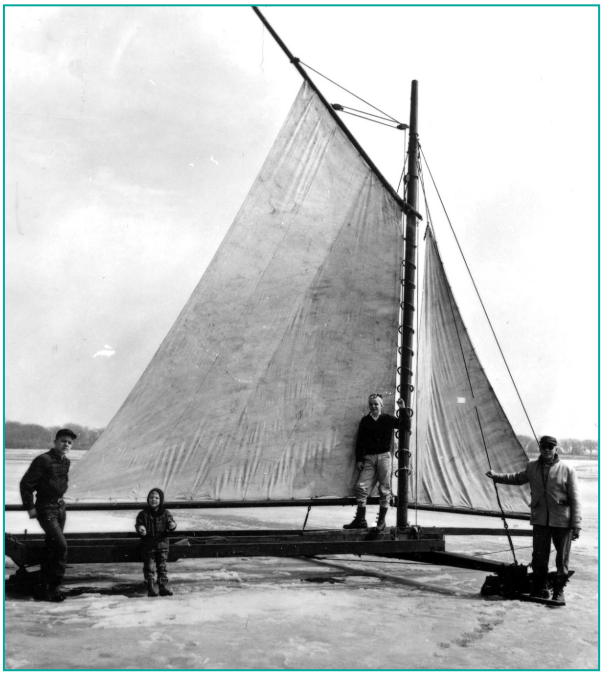
An early mention of an ice boat on White Bear Lake occurred in late November 1881; the boat was called a "present attraction...a sloop-rigged ice boat...[that] skims over the smooth ice with speed sometimes double that of the fastest locomotive". On Lake Minnetonka, the first ice boat race was held in 1886 and after years of ice boating on the lake, the Minnetonka Ice Yacht Club (MIYC) was founded in 1899; the MIYC building was constructed on Bug Island in St. Louis Bay. By 1901, 167 members of the MIYC ran 17 large ice boats that ranged from 28.00 to 49.00 feet long and 16.60 feet to 26.75 feet 'in the beam' between the side runners. Six of the big ice boats of the Hudson River were sold to Lake Minnetonka sailors after the river was kept open for shipping during the winter months. Ward Burton purchased 2 of the fastest Hudson River ice yachts, the *Zero* and *Northern Light*. Burton, his crew of 2 men, and Zero, ran the 5 miles between Gideon Bay and Wayzata Bay with winds between 36-46 mph - in 3 minutes 47 seconds (Kunz 1982, 45-47; *Minneapolis Tribune* 1881).



Early ice boats on Lake Minnetonka (West Hennepin History Center, Spates F060209-030, Wyer W1-59).

Ice boat regattas in the Twin Cities area in the mid-to-late 20th Century most often took place on White Bear Lake, Bde Maka Ska, Lake Harriet, and Lake Minnetonka. In 1963, the White Bear Lake and Lake Harriet Ice Yacht Clubs had formed after a resurgence of the sport since a lull in popularity since World War II. The best conditions for ice yachting occurred when there was an extended mild autumn with a late lake freeze; any snow that falls mixes into the lakes instead of piling up on the surface. Bob Taft not only built ice boat kits, he raced ice yachts in many places. In the late December 1963, Taft said "Minnetonka should be fine this weekend. There are about 40 boats on Minnetonka...." although he usually competed at White Bear Lake, claiming, "iceboating is no good without competition". After the new year, the portable nature of 'modern' ice boats were focused upon by Taft, and the company produced small 1-seat 'DN' ice boats. Detroit News (DN) ice boats received their designation from newspaper-sponsored regattas that featured these small boats. Taft reported "that only one type of iceboat is growing in popularity, and that's the kind you can throw on a cartop or in a station wagon and take it anywhere....These little DN's go like the wind-even faster.

Their pilots wore crash helmets, and the competition gets mighty strong in snow scarce areas. Lake Geneva, Wis., is generally considered a kind of ice-boating 'capital'". For a March 1964 regatta, Taft created 5 mahogany trophies. When conditions were good for ice boating, newspapers would report "you can expect to see ice boaters shooting around over the weekend. This sport is really mushrooming". In 1965, the St. Paul Winter Carnival organization included ice boating in its calendar of activities, promoting the regattas with claims such as "Ice yachting 80 to 90 mph...30 boats expected to race...they'll go four to five times the speed of the wind that drives them...the DN Class [carries] 60 square feet of nylon sail". After a few years, the Carnival's White Bear Lake "ice yacht regatta" had between 20-25 DN-60 13-foot ice boats competing (*Minneapolis Morning Tribune* 1963b, 1964a-b; *Minneapolis Star* 1965; *Minneapolis Tribune* 1964, 1967a).



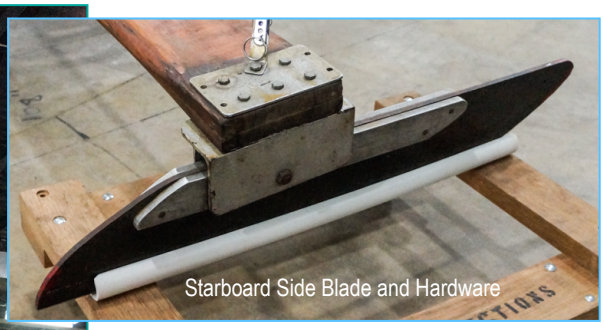
Early ice boat on Lake Minnetonka (West Hennepin History Center, Spates F060209-029).

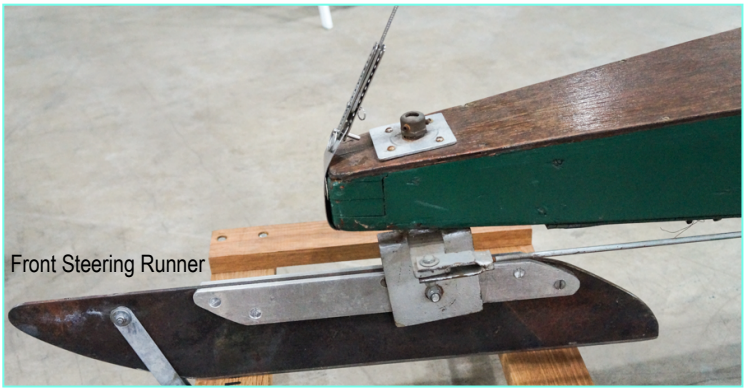
Description: Taft Marine Woodcraft Company Kit *Green Hornet* Ice Boat (GHIB)

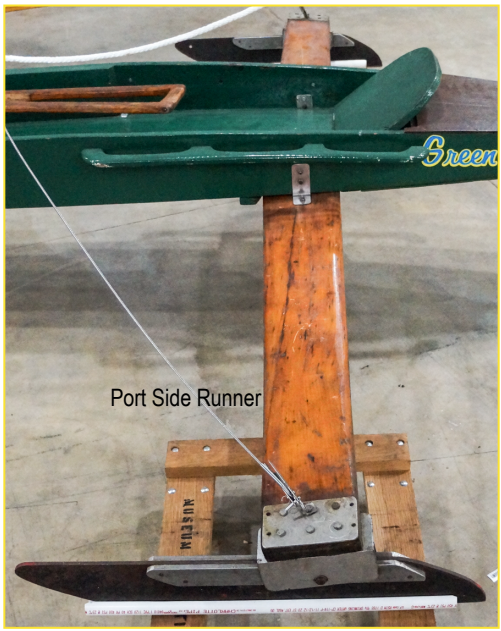
MHM documented the Taft Marine Woodcraft Company Kit *Green Hornet* Ice Boat (GHIB) during 1 day of 3D scanning in February 2021 at the Minnesota Historical Society storage annex. DN ice boats and their construction attributes and details are defined by rules set at the International DN Ice Yacht Racing Association (IDNIYRA), founded in Michigan in 1962. DN North America follows the guidelines and rules set out by the IDNIYRA. The GHIB's wooden hull is 12.00 feet long[8], 21.00 inches at its widest point, has an 8.00-foot rudder plank length, a 16.00-foot mast, an 8.00 boom, and 60 square feet of sail. The bow is 'pointed', but the tip of the vessel is blunt. From the bow toward and past amidships, the GHIB widens out to the accommodate the cockpit - a rectangular cavity with a seat back. The stern narrows to a blunt point and it is hollow; it serves as a storage area. The foredeck extends from the bow to amidships and the small aftdeck covers the storage area behind the seat back. The boat's sides, bottom, and decks are comprised of thin plywood and the vessel is constructed in such a way as to create a hard chine. The front steering runner is comprised of its metal blade and fasteners; the 2 side runners are constructed of wood with metal blades and fasteners. The rudder plank is located under the cockpit where the pilot sat, allowing for the distribution of their weight during operation. It is attached to the hull with brackets and bolts. Two appendages attached to both the port and starboard cockpit just under the gunwale served carrying handles. The tiller is a large triangle that is secured to the foredeck with a metal base that is bolted to the foredeck just aft of the mast. The tiller controls the forward runner through under-hull steering rods that are manipulated by the movement of a transverse bar attached to the tiller by through-hull fittings. The mast is

[8]The Winter Carnival promotions for DN ice boats recorded the length of the class as 13.00 feet. This measurement included the front runner that extends further forward than the hull.

stepped into a step that is attached to the foredeck; it is designed to allow the mast to move and flex during a race. A wire stay attached to the bow stabilizes the mast. The boat's rigging is controlled by attach blocks and swivel blocks located on the foredeck with the tiller base, on the aftdeck, and on the boom. Below the hull, a taut wire attached to the bow, on a triangular bracket amidships, and to the stern acts as a hogging truss to prevent hogging - the sagging of both the bow and stern - of the wooden hull. The hull's sides are painted green while the decks and bottom are stained dark and varnished. The ice boat's name in cursive is applied to both stern quarters using light blue and yellow stickers (DN North America ND).







(photos by Nehowig and MHM)

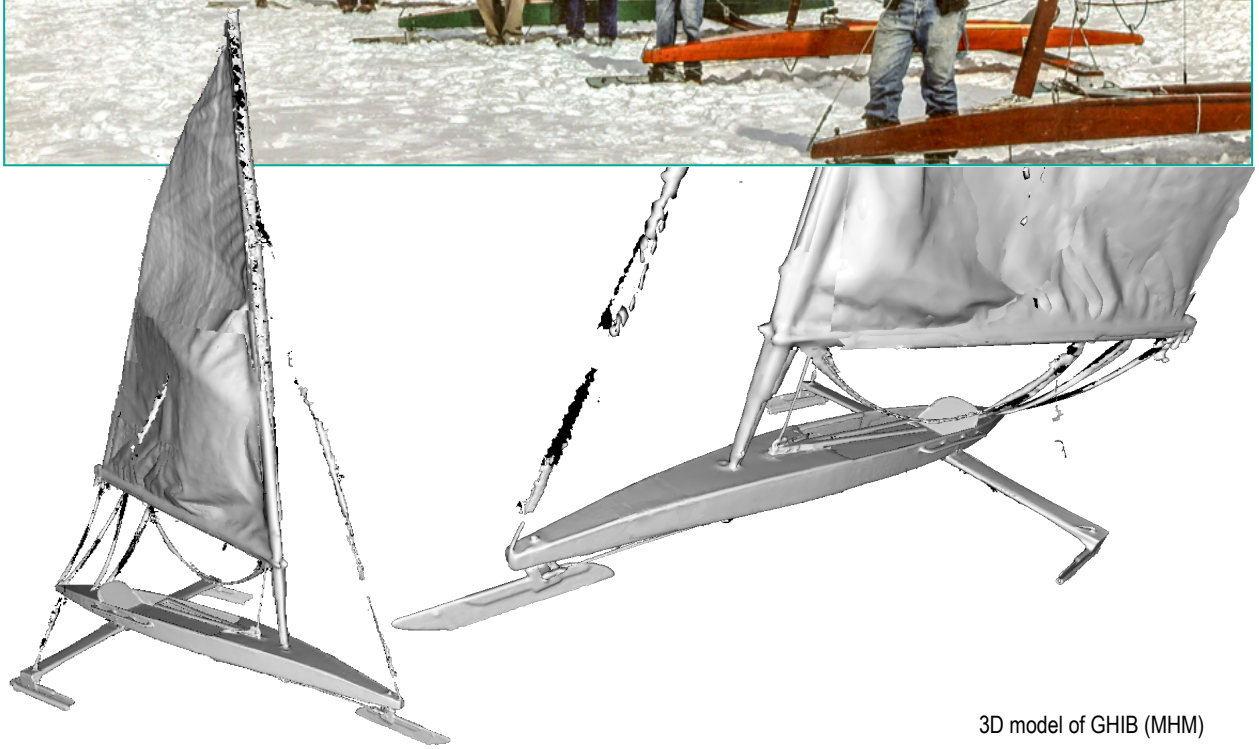
(photos by Nehowig and MHM)

Behind Seat Stern Storage

(photos by Nehowig and MHM)

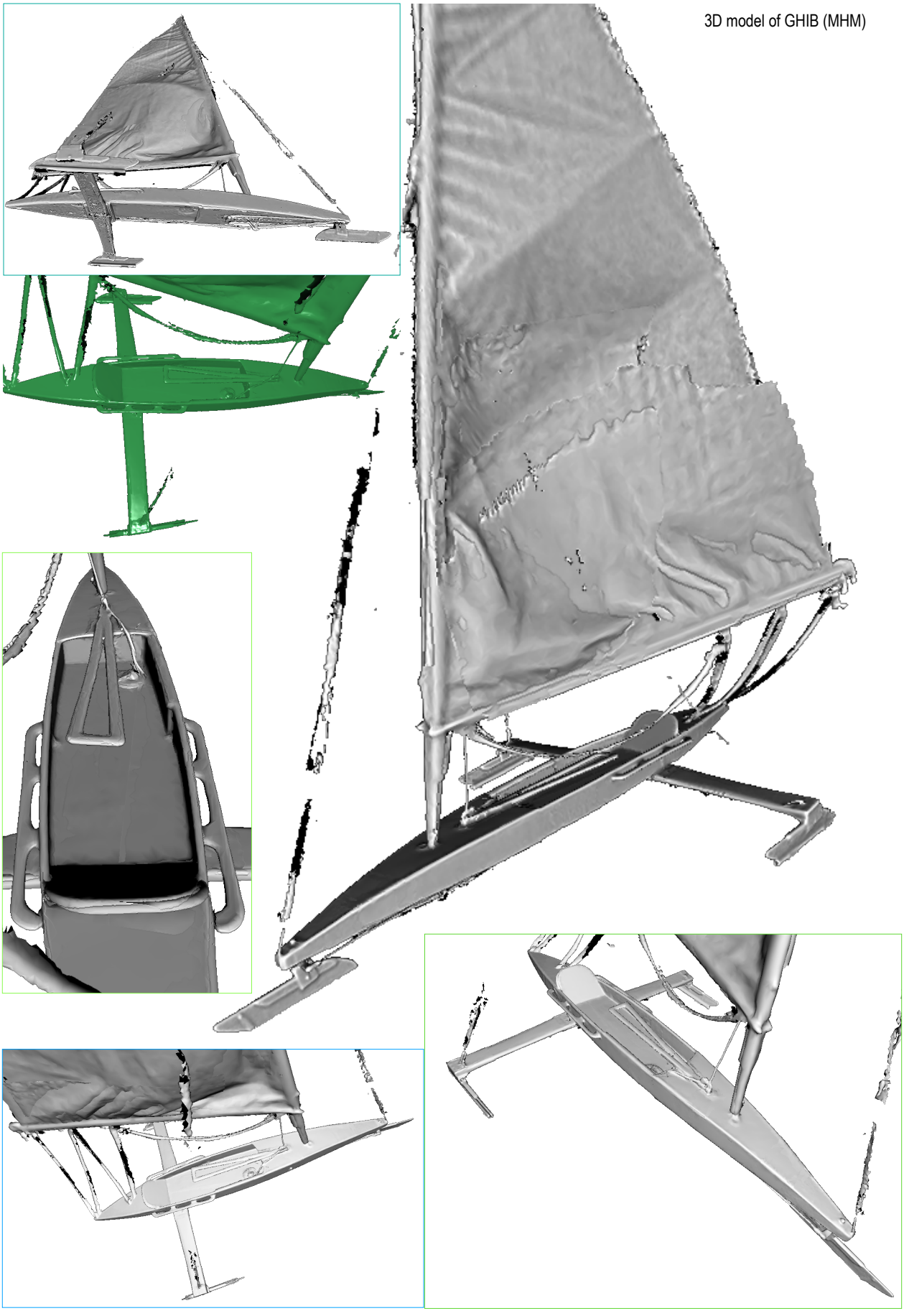
Ron Carlson and Gary Peterson of Minneapolis owned raced the *Green Hornet*, primarily on Bde Maka Ska and White Bear Lake. They assembled the Taft Marine Woodcraft GHIB using the Taft factory space and the company's other products. The MNHS accession information associated with the GHIB notes that the ice boat was constructed 'around 1960' (Dan Cagley, personal communication, October 2020). This date is reasonable, considering Bob Taft was involved in the sport by at least December 1963 and likely earlier, and would have sailed his own boats.[9] The GHIB is in very good condition and will remain healthy in her current climate-controlled environment.

Green Hornet, Gary Peterson, and Gary Retier (middle) before an ice boating regatta on Bde Maka Ska in 2013, the last year they sailed (Minneapolis Sailing Center 2013 [formerly Calhoun Yacht Club]).

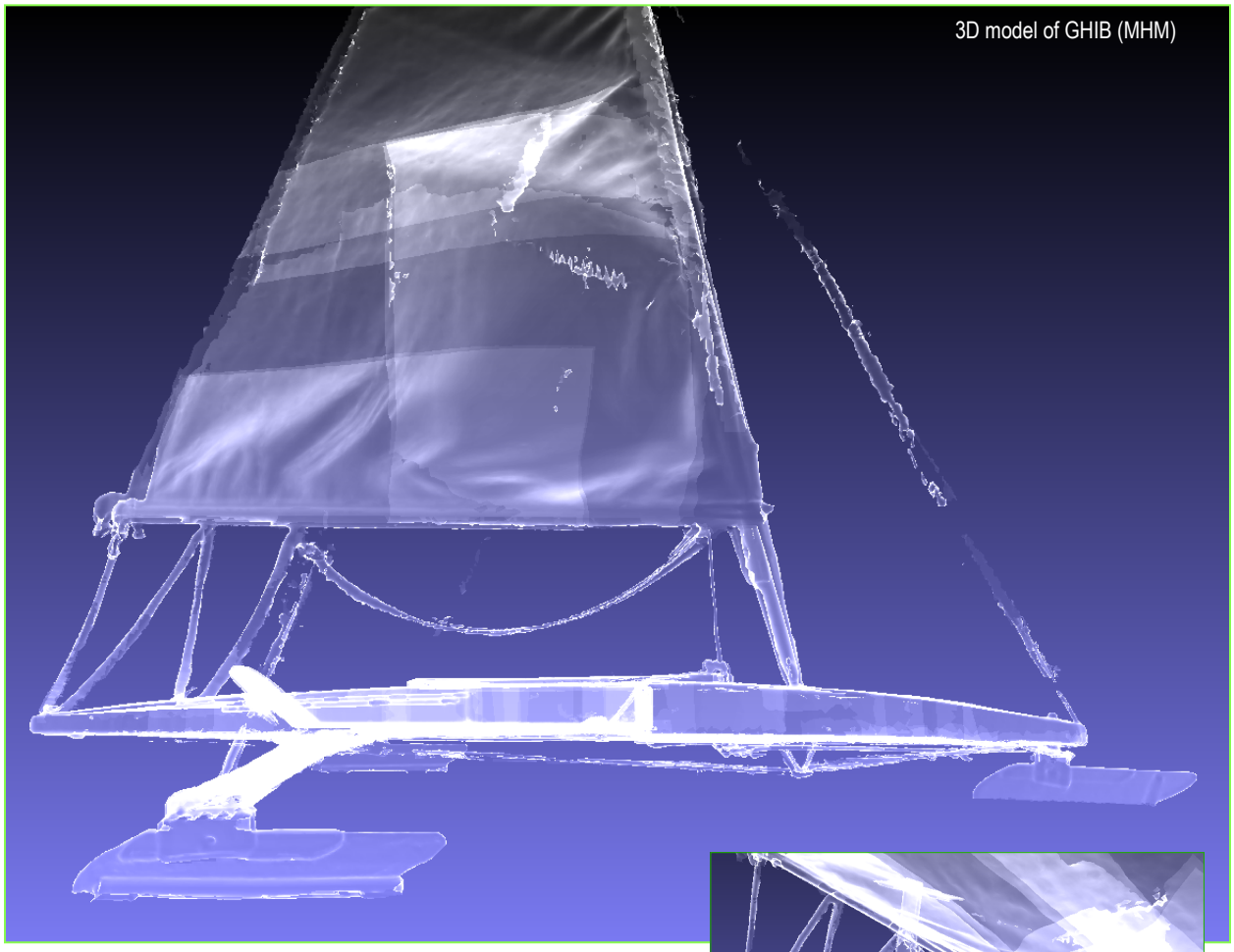


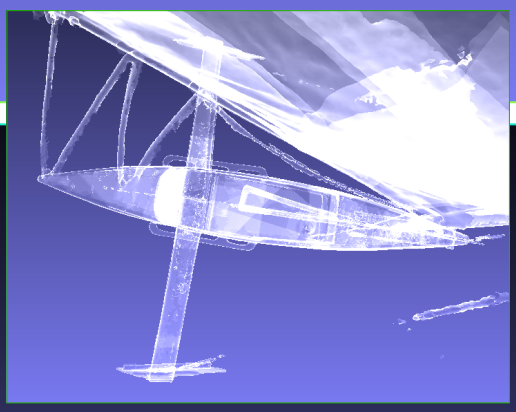
3D model of GHIB (MHM)

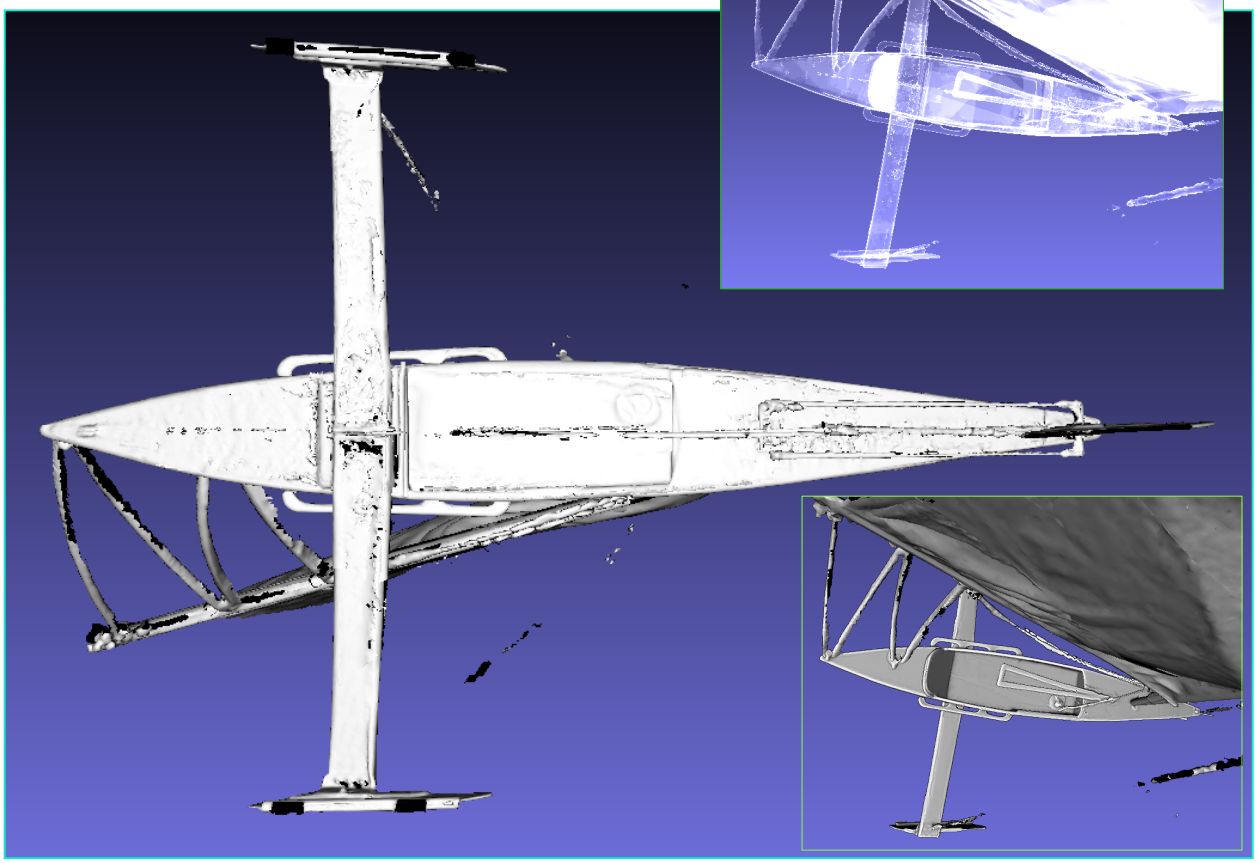
[9]However, the earliest example of ice boat kit advertising that could be located dates to December 1969 (*Field and Stream* 1969, 139).



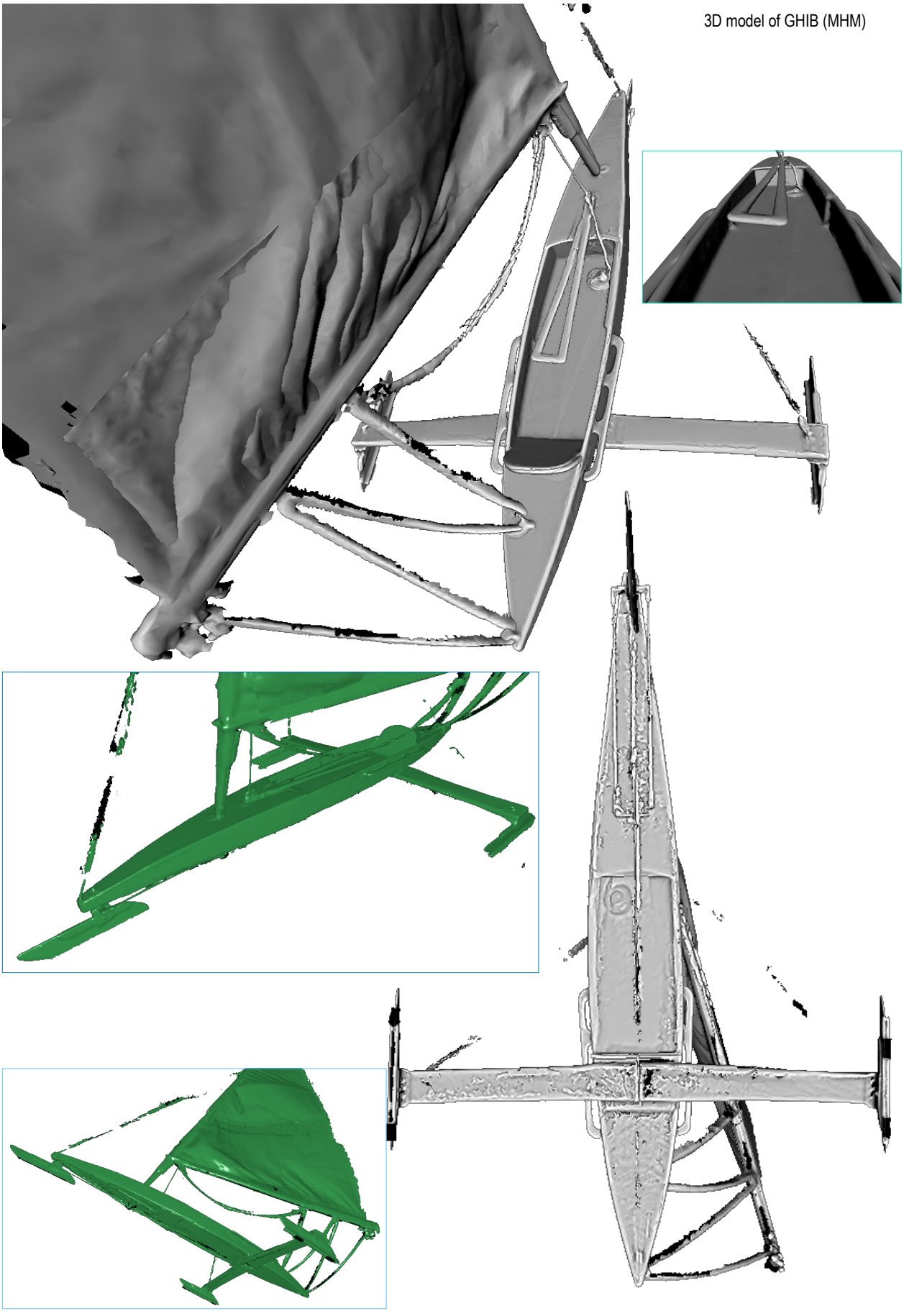
3D model of GHIB (MHM)

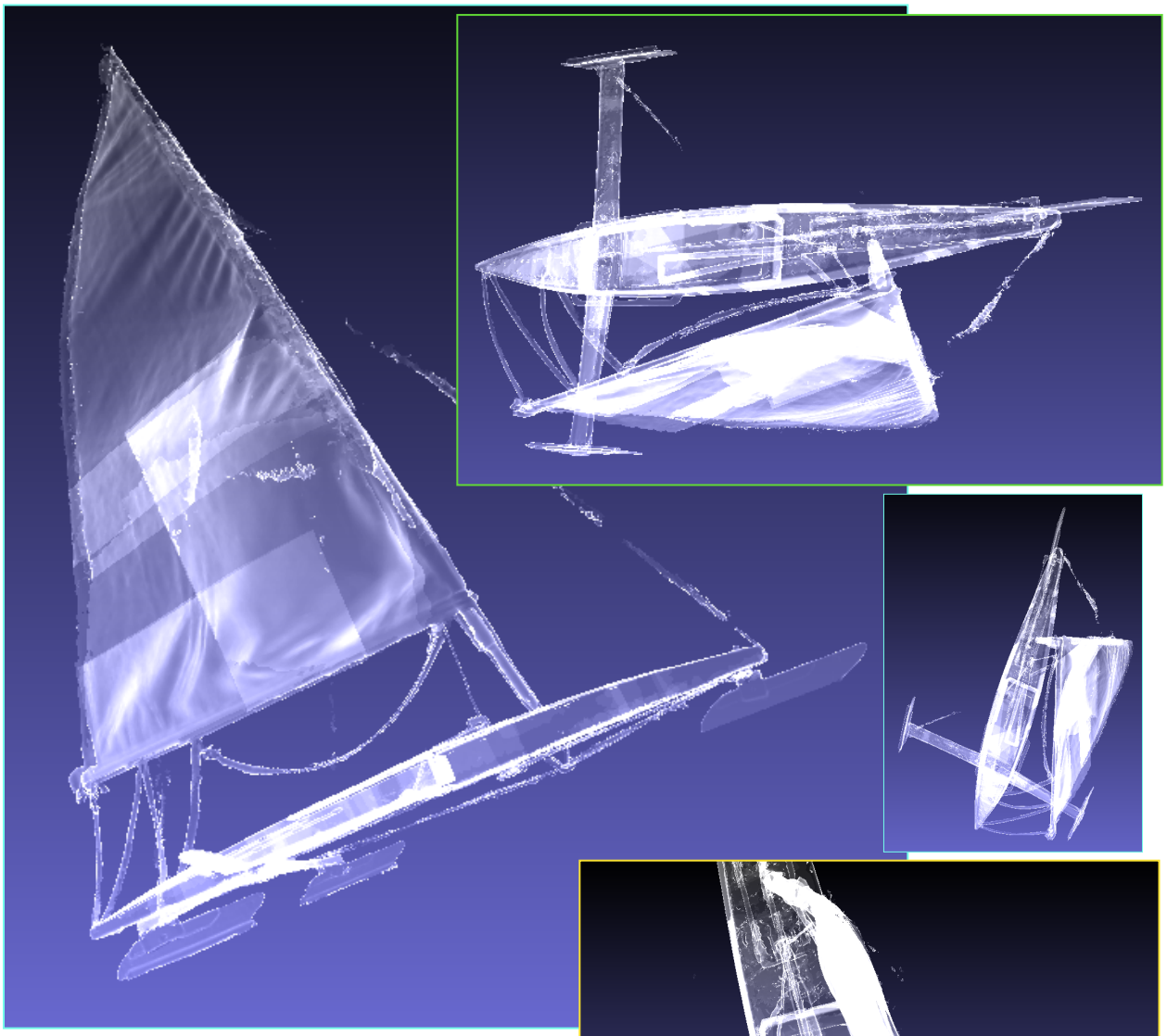

3D model of GHIB (MHM)



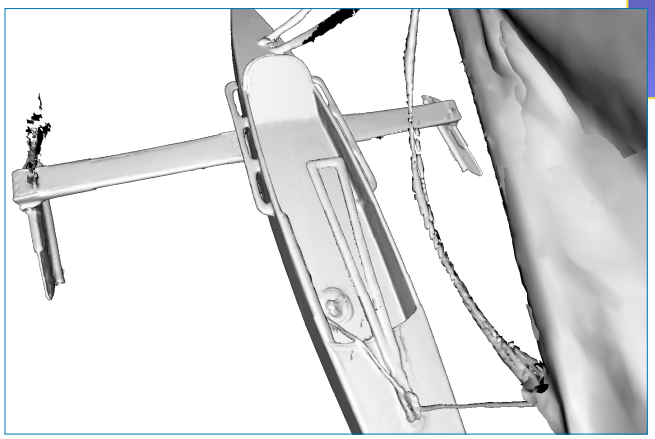


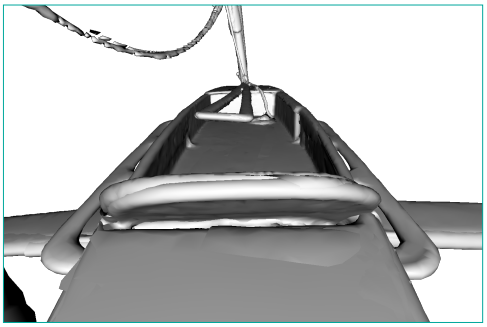
3D model of GHIB (MHM)





3D model of GHIB (MHM)





Wooden Outboard Runabout Homebuild (WORH)
Trooein Collection, White Bear Lake, MN

History

MHM learned of the existence of the Wooden Outboard Runabout Homebuild (WORH) during a previous Minnesota Small Craft study; the WORH is housed in the same building as the Tonka Bay Boat Works CronaCraft Deluxe Outboard Runabout-2, documented in 2020[10]. No actual manufacturer's information has survived about the WORH, but her Minnesota registration information claims she was constructed in 1975 and was a homebuild (Kong Moua, personal communication, July 2020). Based on this construction date, MHM has determined - if she was constructed using a Minnesota-based boat kit - it would have been a Taft Marine Woodcraft (see above) or Luger Industries boat. Two other much less likely boat kit makers that may have produced the WORH are Watsoncraft of Farmington and Boat Kits, Inc. of Bloomington. In consideration of a non-Minnesota company that offered kit boats for sale, Chris-Craft is the most likely company to have fabricated the WORH. Several other companies, many short-lived, offered kits for future boat owners as well.[11] Luger Industries, and its subsidiary Luger Marine, was founded in 1950 by Ren and Orm Luger in their home garage. Initially the brothers did not produce their own boat kits, but they designed them and took delivery before they marketed and sold them to their customers. The company was located on Nicollet Avenue and then Lyndale Avenue in South Minneapolis, and then Bloomington, and then Burnsville by the late 1960s. Over the decades, Luger Boat Kits were featured in advertisements and in special interest columns. For years, Luger produced wooden boat kits, but by 1959, fiberglass boat kits were "what's new in boating...Fiberglass boats now are even coming in kit form, with Luger Boats, Minneapolis, finding a terrific public response to its new three-piece hull, according to Ren Luger. He said all you need to put the fiberglass runabout together is a screw driver and a hand drill". With the production of the fiberglass Luger kits, the company ceased production of wood boat kits (Fiberglassics ND-3; *Minneapolis Star* 1955a, 1957b-c; Minnesota Department of Business Development 1959, 3732; 1967, 159; Minnesota Department of Economic Development 1970, 253; 1975, 176; *Picture Magazine* 1959, 26; Wangstad ND).

Since Luger focused on fiberglass kits by 1960 - although they continued to sell wooden kit boats for a time - research and development in the wooden kits was halted. Therefore, MHM contends that WORH is likely not a Luger kit - unless - it was assembled as 'new old stock'. This is a possibility; MHM located a classified ad from August 1977: "LUGER BOAT KIT New in crate, 14' plywood deluxe runabout, every possible accessory". This particular boat cannot be WORH due to the difference in size, but it is possible that another kit remained crated for 2 or 3 decades prior to its assembly. Similarly, a Taft Marine plywood runabout - already constructed - was listed for sale in 1972. Again, like the Luger boat listed in 1977, this boat was a 14-foot runabout. Additionally, the latest evidence that MHM could locate concerning Taft's

[10]See MHM's *Minnesota Historic Runabouts Analysis and 3D Scanning Project Report*, 2020.

[11]Acme Boat Company of Miamisburg, OH; California Kit Boat Company of Los Angeles; Chrysler-Craft Boat Kits of Tonawanda, NY; Custom-Craft Boat Kits of Buffalo, NY; Hagerty of Cohasset, MA; Ozarka Boat Kits of Woodstock, IL; Roberts Kit-Craft of Durham, CT; Sea Shell Kit Boats of Branford, CT; U-MAK-IT Kit Boats of the Bronx; (Fiberglassics ND-3; *Hunting and Fishing* 1953a, 51-53; 1953b, 40; *Sports Afield* 1955, 79, 109).

production of wooden boat kits dates to May 1972; the company was searching for experienced woodworkers to hire "for cutting & packing kits" at their Columbia Heights factory. All other references to Taft kits, beyond this date, are associated with their fiberglass boat kits and their new location in Brooklyn Center. Therefore, MHM contends that the WORH could be either a Luger or Taft, and possibly a Chris-Craft, although the third option is much less likely. Further, the boat may be older than the 1975 boat registration indicates since the current number may not be the watercraft's original number (*Minneapolis Star* 1972a-c; *Minneapolis Tribune* 1977).

(*Hunting and Fishing* 1953a, 51-53)

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New 17-ft. Speedboat. Kit only **$449.** Kit assembled and painted, **$749.**

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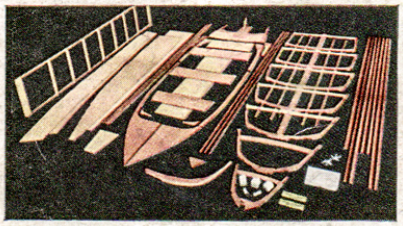
(*Hunting and Fishing* 1953a, back cover)



Kit for 14-ft. De Luxe Runabout.

for as little as **$45** *full price!*

Assemble a new Chris-Craft Boat Kit and *save ½ or more!* It's *easy!* Each kit includes accurately precut Philippine Mahogany parts and Fir marine-plywood panels; brass fastenings; seam compound; decals; and easy-to-follow, illustrated assembly instructions.

Also, a new Chris-Craft Boat Trailer, packaged for convenient shipment anywhere. You can complete assembly in *less than an hour!*

See your dealer or mail coupon *today* for FREE catalog. Buy NOW!

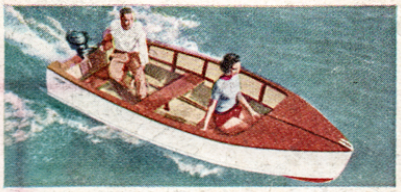
(Prices quoted are for kits, f.o.b. factory. Prices and specifications subject to change without notice.)

Barrel of fun is this 8-ft. Pram. Kit only **$45.** Easy to assemble! Also Sail Kit, optional extra. Mail coupon for FREE catalog *today!*

Outstanding buy at **$139**—new 14-ft. Sportsman Kit. There's a sturdy 14-ft. Fishing Skiff Kit, too, only **$121.** Buy your kit *now!*

Stunning 18-ft. Outboard Express Cruiser. Kit, **$595.** Kit also available assembled and painted, **$895.** Send for FREE data!

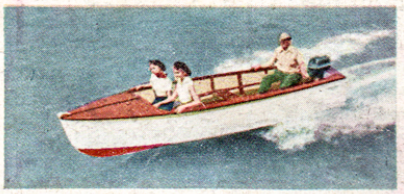
High-speed 10-ft. Utility Racing Pram—a dandy for fishing and hunting, too. A money-saving value at **$91** for kit. Buy now!



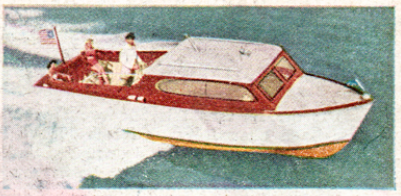
Popular 14-ft. De Luxe Runabout with 62-in. beam. Kit, **$178.** A cinch to put together! Also available in standard model, only **$167.**

Beautiful 21-ft. Express Cruiser. Kit, **$809.** Kit also available assembled and painted, **$1449.** Also, 21-ft. Sportsman Kit, **$660.**

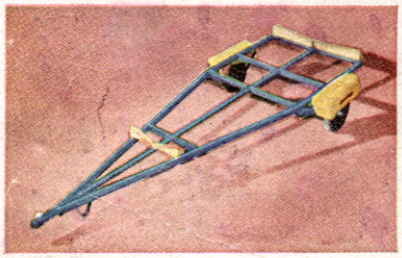
Lightweight 12-ft. Runabout for convenient car-top carrying. Kit, **$112.** Also, 14-ft. Duckboat Kit, **$89.** Send for complete data!



This 16-ft. De Luxe Runabout is big and rugged for rough, open water. A real family boat! Kit only **$261.** Mail coupon *today!*



Roomy 26-ft. Cruiser. Kit, **$1764.** Designed for outside or inside controls (or both). Beautiful 31-ft. Express Cruiser, too—**$2310.**



Smooth-riding Chris-Craft Boat Trailer (*only* **$125,** tax extra) has welded-steel chassis, individual wheel suspension, Timken bearings. Capacity: 650 lbs. Stake Body Conversion Kit (**$36,** tax extra) is optional extra, quickly converts boat trailer into utility trailer. Platform is 50″ x 20″ with 24″ sides. Big double value!

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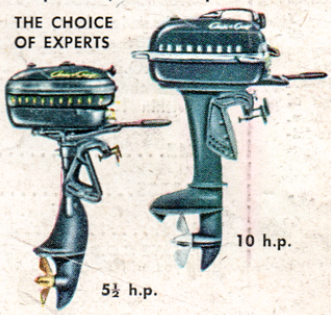

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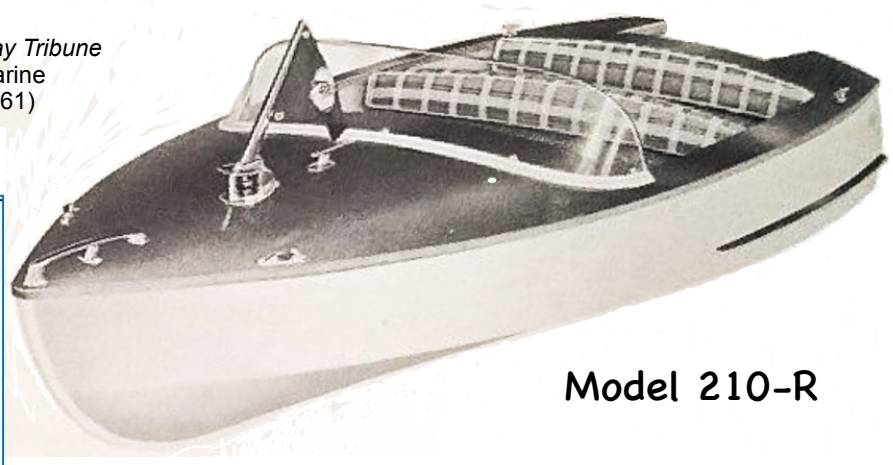
(*Minneapolis Sunday Tribune* 1956a; Taft Marine Woodcraft 1961)



Description: Wooden Outboard Runabout Homebuild (WORH)

MHM documented the Wooden Outboard Runabout Homebuild (WORH) in 1 day of 3D scanning in February 2021. The WORH's wooden hull is 11.50 feet long, 4.60 feet in the beam, 3.60 feet at the transom, with a 1.50-foot depth of hold. The stem consists of a triangular (in cross section) outer stempost that is curved and attached to the keel. A U-shaped metal tow ring is attached to the stempost. At the stern, a rectangular keel plank is attached to hull bottom with bolts. The hull, including the foredeck and aftdeck, consists of marine plywood. The aft edge of the foredeck is shaped by flush coaming that serves at a dashboard. The gunwale of WORH is intact; the plywood sides can be seen 'sandwiched' between a rubrail on the outer hull - with a metal strip guard attached - and a stringer on the inner hull. The square transom, designed to take an outboard motor, is marine plywood with tumblehome - where the hull narrows noticeably from the waterline to the gunwale - and its top edge is cambered. Metal lifting handles are found on the port and starboard transom near the gunwale and 2 cleats are attached to the aft deck on both quarters. A round hole on the starboard side aftdeck would act in a variety of ways, from holding a flag, a place for lines to pass, access to a gas tank, or even a cup holder. An inner, wide wooden motor board extends from the gunwale to the bottom of the hull. A smaller metal plate is attached to the gunwale; it has markings where the mounting bolts held the outboard motor in place. The external motor board is missing. The aftdeck is also cambered and has a wedge cut out of it to accept the motor's power head. A flush combing is attached to the leading edge of the aftdeck. Underneath the aftdeck (when the rear seat is removed), a substantial stern knee supplies strength on the midline and to the transom, and it fits through a slot in the motor board. Stringers are seen at the gunwale and along the inner hull at the turn of the stern bilge with 2 vertical beams at each quarter. The boat's drain plug is cut into this stringer. The steering cables and pulleys are also located under the aft deck, as well as the fuel line.

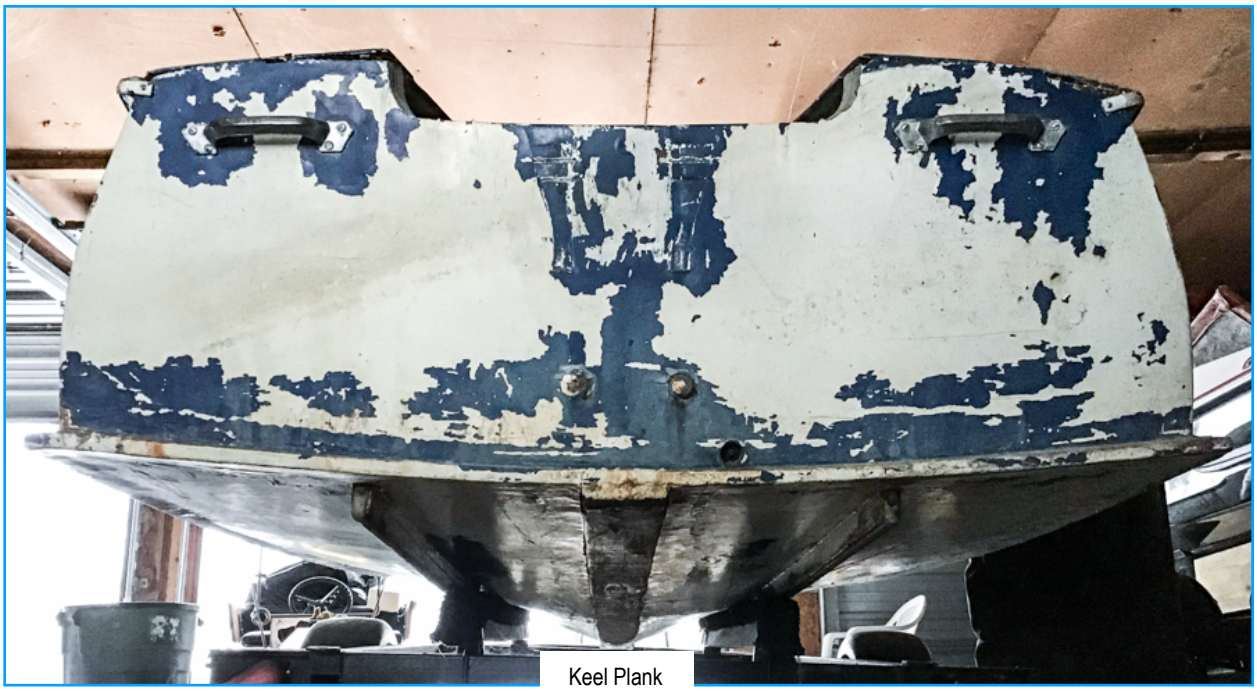
Splashrail

(photos by MHM)

Port Quarter

Starboard Quarter

Transom



Keel Plank

Stern Knee

(photos by MHM)

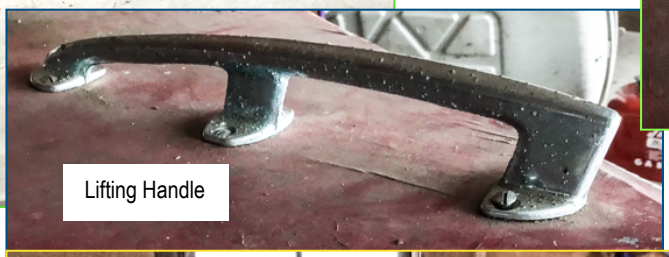
The WORH has a wide flat bottom made of plywood sheets. The boat has a hard chine where the sides meet the flat bottom, and it is designed to create a splashrail. The splashrails on both port and starboard continue forward and meet at the stempost. The flat bottom of the hull at the stern toward amidships drops downward into a deep-V hull at the bow. The foredeck has a lifting handle at the bow, held on with 3 bolts. Two bow chocks are attached to the deck on both port and starboard and a cleat is attached amidships between them. The windshield is attached and complete, and the red steering wheel is intact and in place. The black Mercury Quicksilver controller with its steering cables is in place on the starboard side. Three sets of frames are attached to the boat's sides on both port and starboard; 2 sets of these frames - the fore and aft examples continue at the turn of the bilge as knees that continue on as floors. The floors rest on a keelson and 2 stringers with a movable thin plywood floor in place. Two substantial stringers add rigidity on both port and starboard at the turn of the bilge, and 2 more stringers part-way up the inner hull. Those stringers support both the forward and aft benches and the frames that hold the bench backs in place. The benches themselves are simple plywood with minimal padding and covered with vinyl. The outer hull is painted white and the decks are a dark red or dull maroon color. Lastly, as mentioned above, the boat's registration number - MN 5149 EQ - dates to 1975, expired in 2003, and may not be the watercraft's original number, particularly if she was constructed years earlier. The vessel is awaiting restoration and is safe in a dry and secured building.

(photos by MHM)

Chock

Cleat

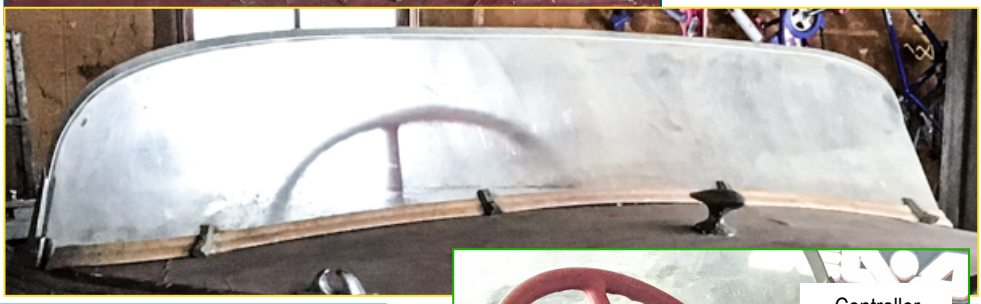
Chock



Lifting Handle

(photos by MHM)

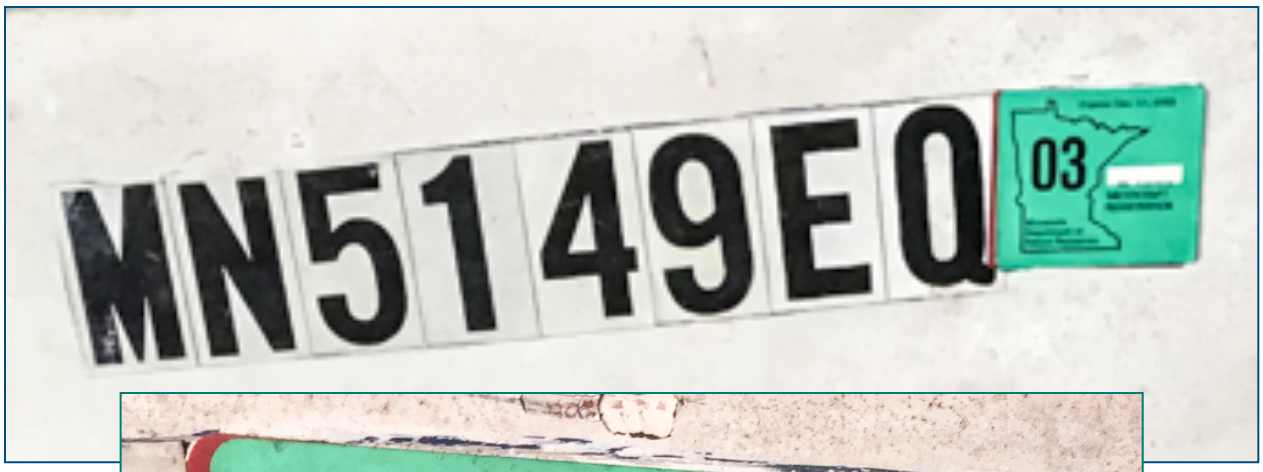
Towing Ring



Controller

Inner Bow Stringers
Under the Foredeck

Stringer and Frames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Minnesota
Department of
Natural Resources

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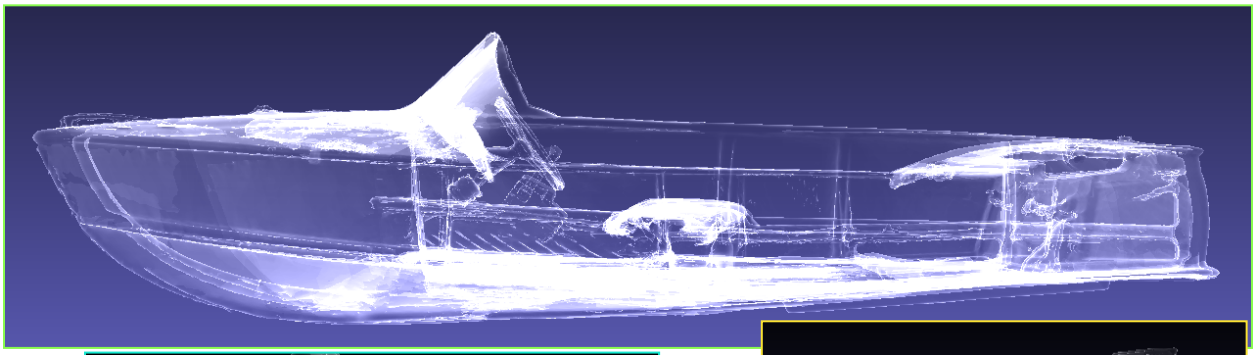
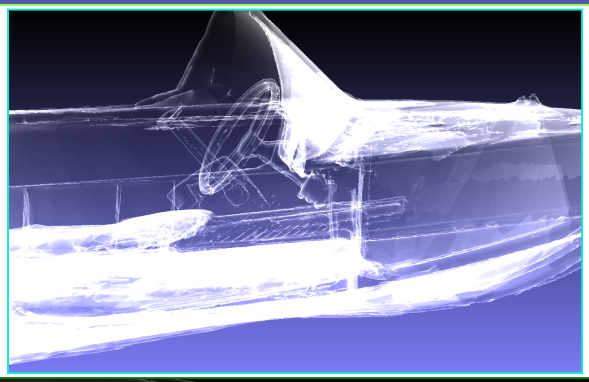
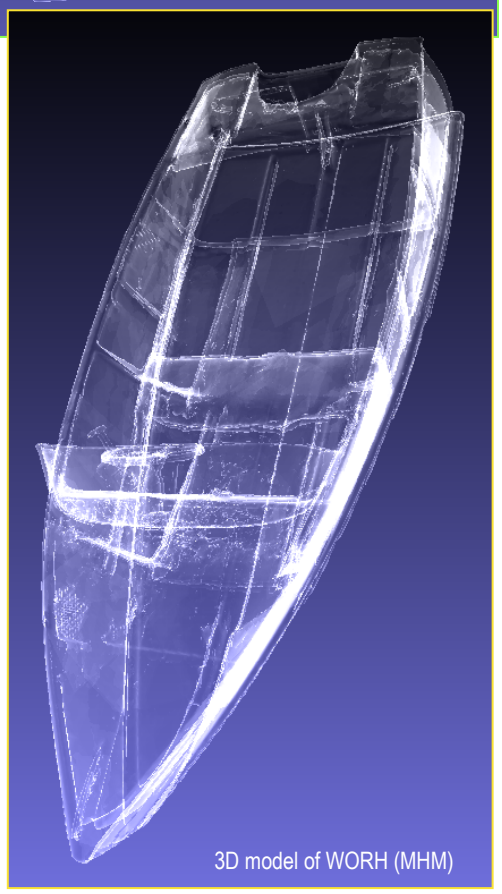
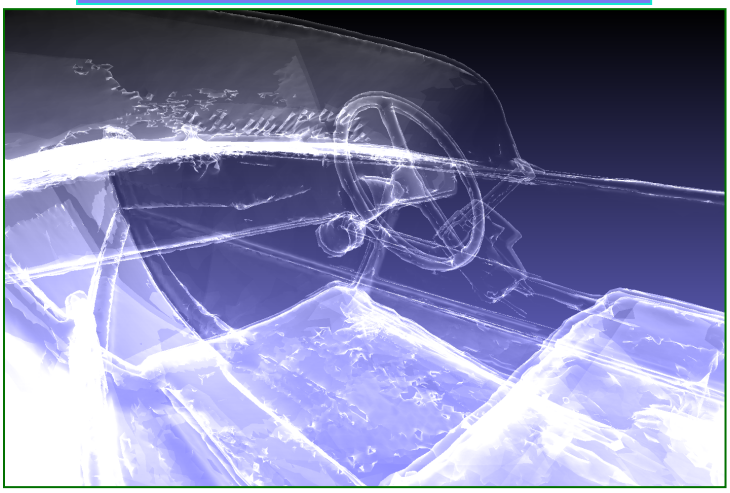
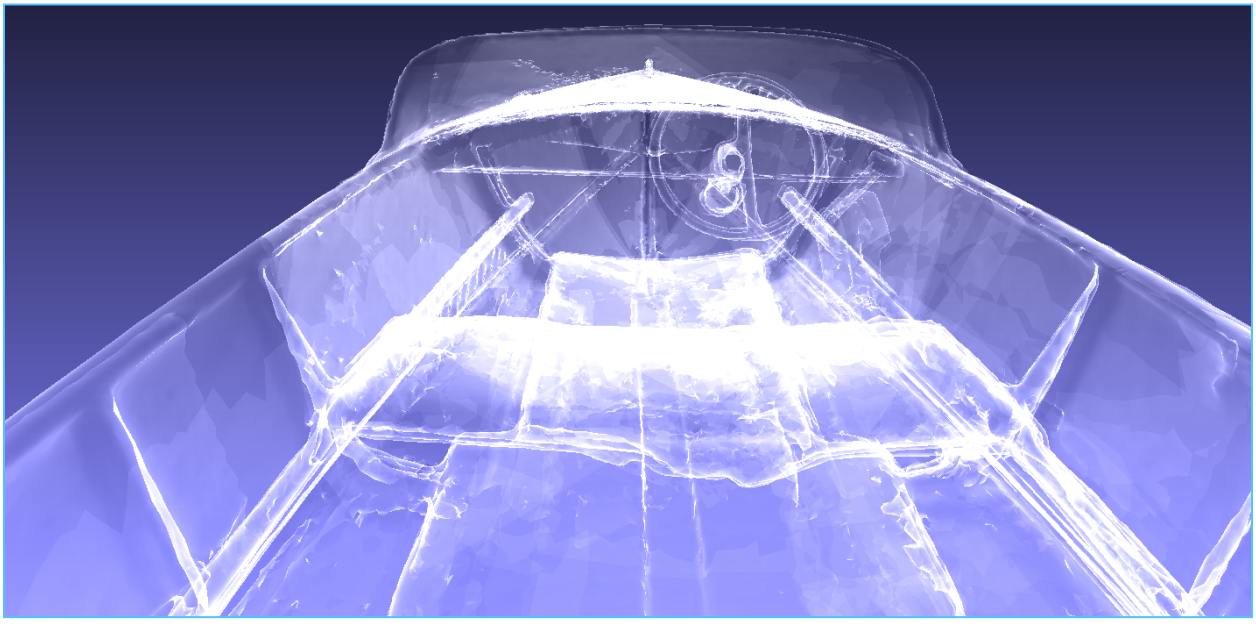
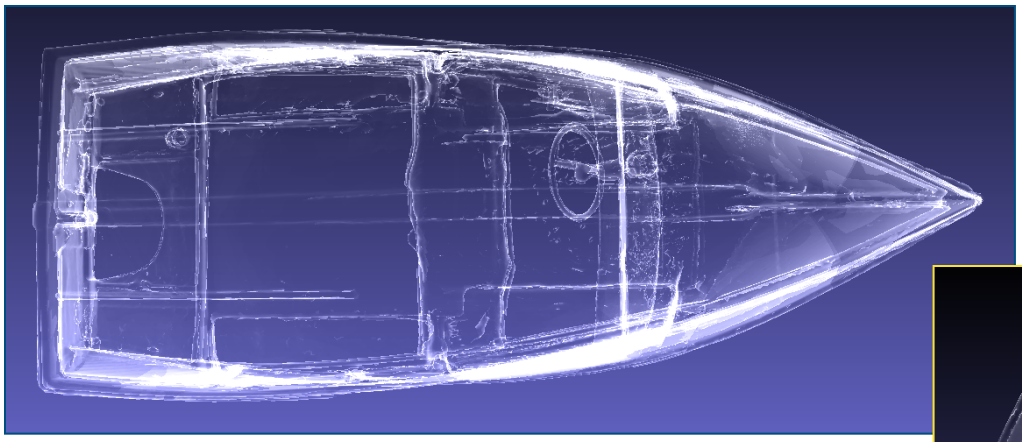


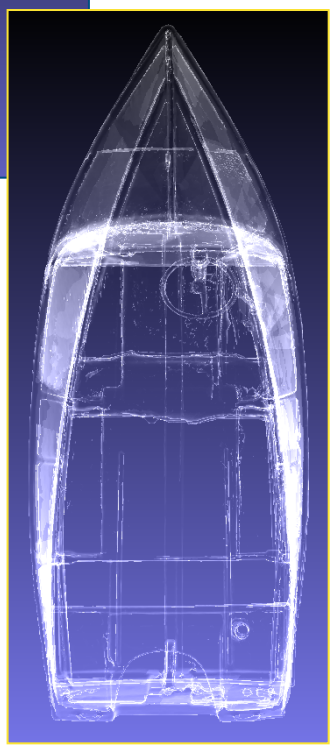


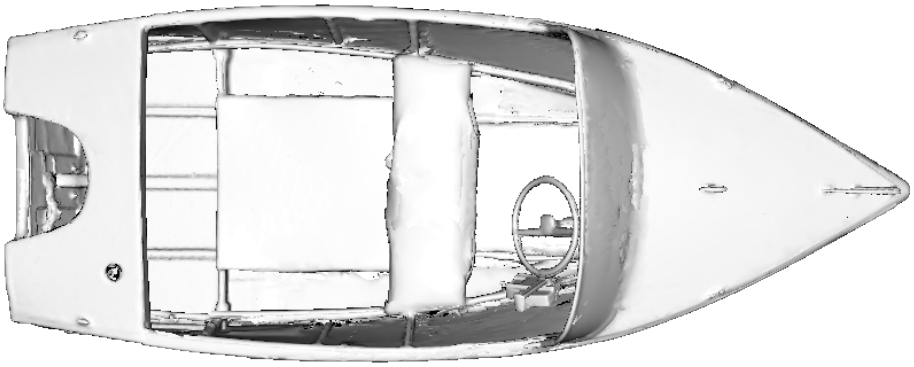

3D model of WORH (MHM)

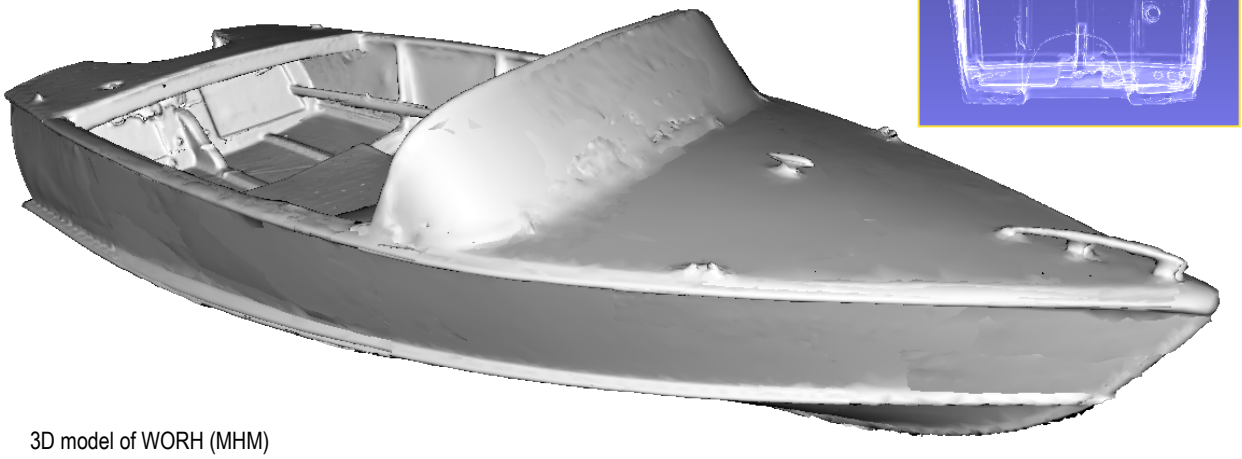












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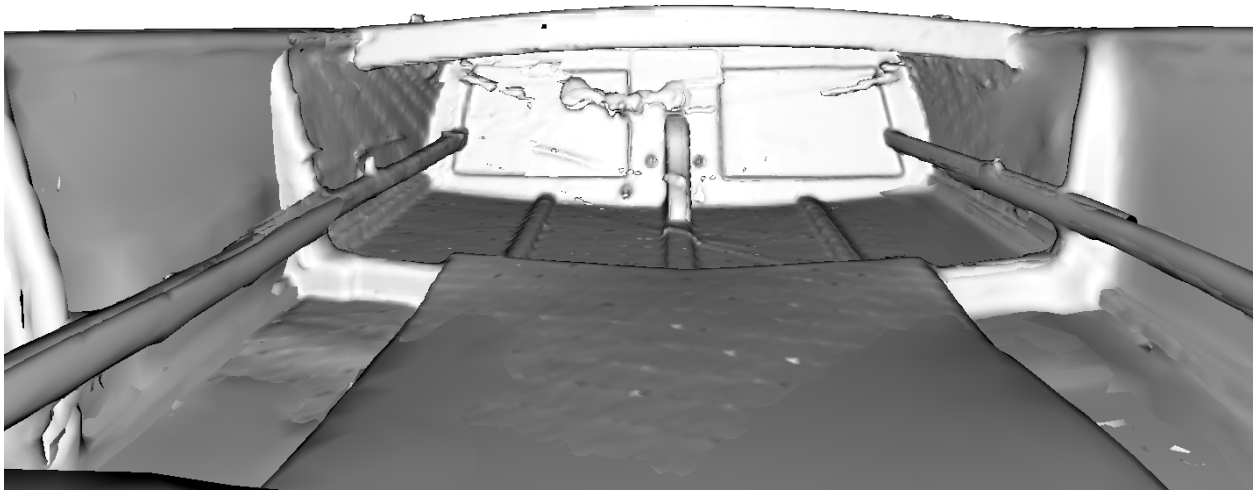

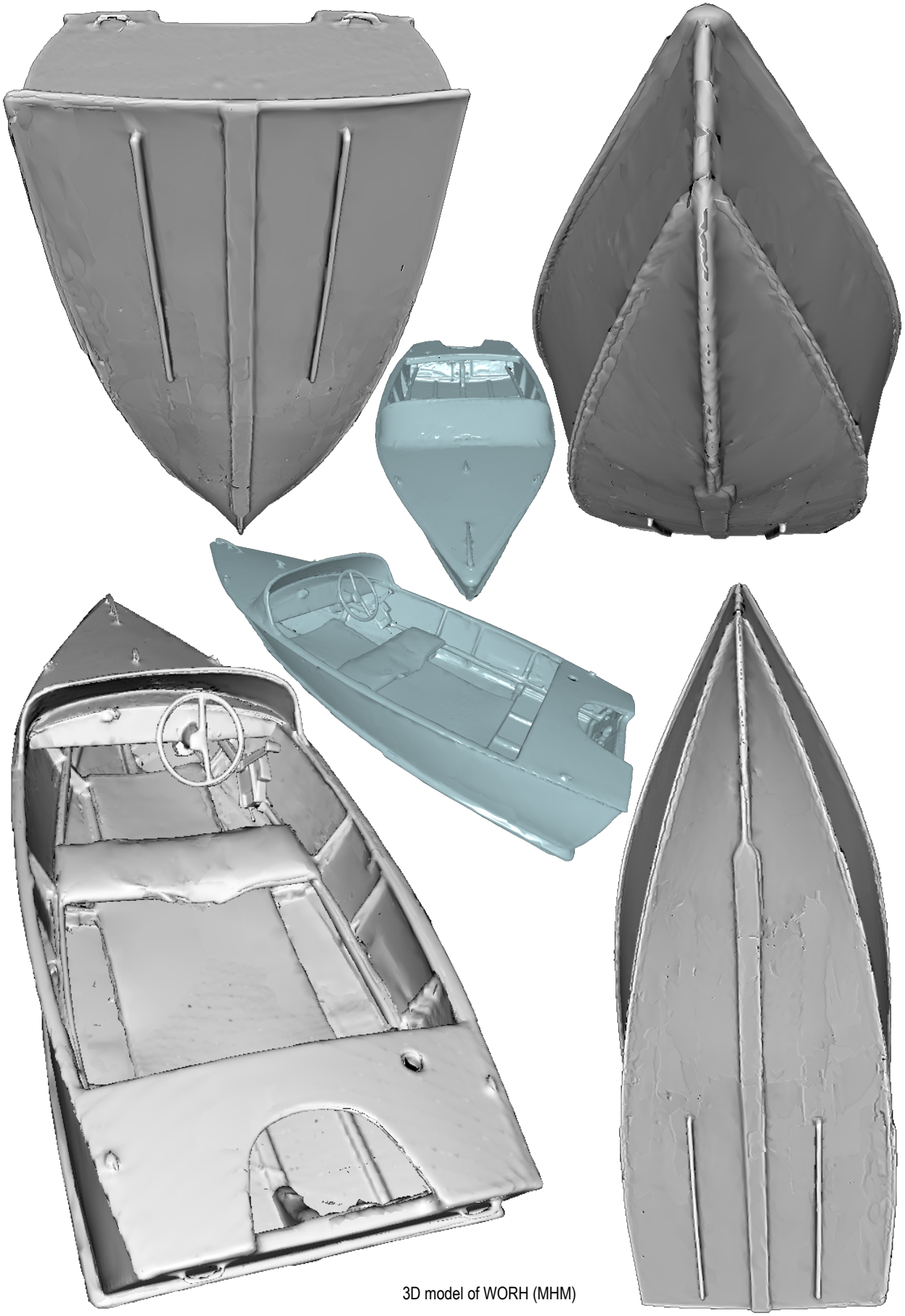

3D model of WORH (MHM)

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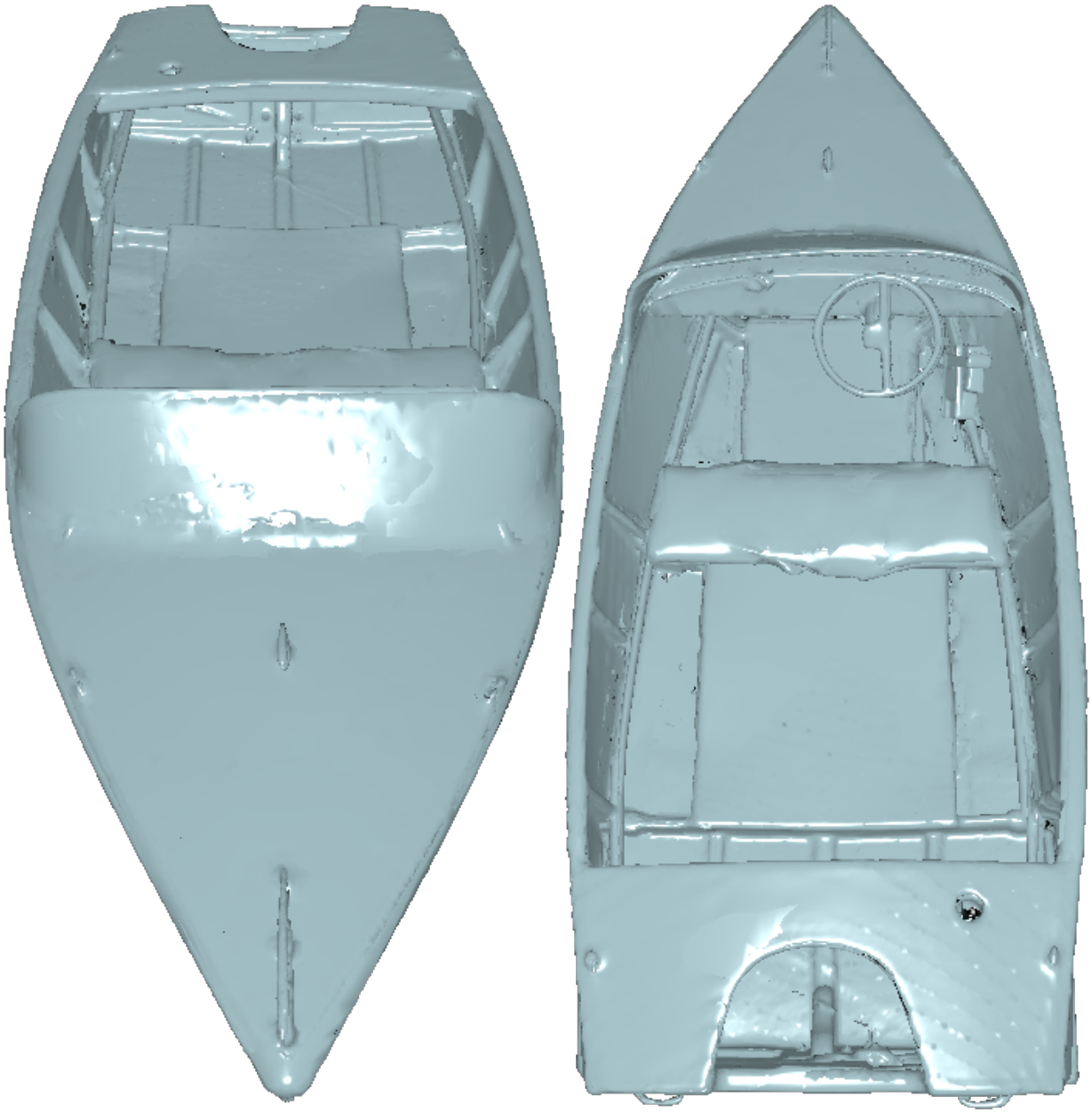

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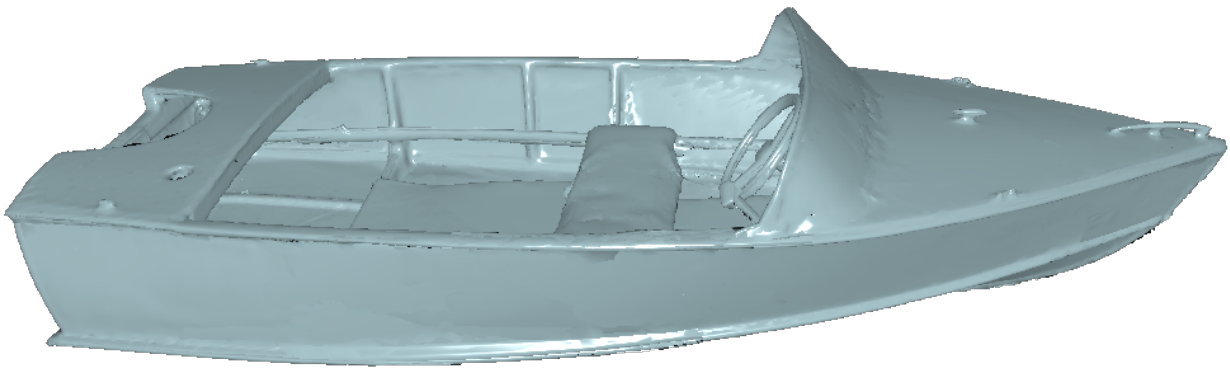

Conclusions

To more fully understand the cultural information the 4 small wooden boats documented during the MWWA Project provides, it is helpful to consider these vessels within their historical contexts. Prior to World War II, wooden boat construction was the norm for pleasure craft, fishing vessels, and even small military vessels such as tugs and sub chasers. Two of the watercraft studied during the MWWA Project represent small pleasure craft and fishing boats from this era: the ABW-LotL and LBW-SFC. Both of these finely crafted slat-wood boats were produced by well-known long-lived Minnesota boat-building companies: Alexandria Boat Works and Larson Boat Works. In 1884, ABW joined several early Minnesota boat-building companies that constructed watercraft for the general public. Several boat-building companies in the Twin Cities were established early including Harrison, Godfrey, Johnson, Moore, Dyer, Brooks, Wise, and Peterson of Lake Minnetonka from 1874-late 1880s; Dingle of St. Paul in 1880; and Long, Ramaley, Amundson, and Johnson between the 1880s-1896 on White Bear Lake (Merriman and Olson 2012a, 16-20; 2012b, 7-10; 2017, 21). The ABW stands out from these many companies particularly because of its geographic location in west central Minnesota, a distance from the Twin Cities. Larson Boat Works was founded and evolved similarly to ABW, in central Minnesota, 4 decades later. Both pre-WWII wooden boats share the construction attributes slat strakes, thin frames and stringers, with bow and stern castings befitting the different companies.[12]

While the post-war years saw the transition from wooden boat-building to primarily aluminum and fiberglass watercraft construction. Dozens of boatbuilding firms were established around the country that specialized in aluminum construction or fiberglass manufacture - and sometimes both processes were utilized by some companies. Many companies did not remain viable for more than a few years, particularly the smaller regional firms. Companies with national reputations such as Hackercraft/Hacker Boat Company, Correct Craft (now Ski Nautique), Chris Craft, Century, Higgins, and Owens continued to construct wooden runabouts, utilities racing boats, cabin cruisers, and yachts, These vessels were in great demand due to the amount of disposable income that was earned during the booming economy. Over the years, many of these name-brands transitioned to fiberglass boat manufacture, along with restoration and maintenance of their decades-old classic and vintage wooden vessels.

Mass fabrication of small wooden watercraft - pleasure craft such as runabouts, ski boats, small cruisers, and open fishing boats - continued primarily in the form of build-it-yourself kit boats. Local Minnesota companies Taft Marine Woodcraft and Luger Industries prospered in their kit boat enterprises, taking advantage of the ease of production of plywood and molded wood for their kits. Other kit boat companies, even in the Twin Cities, also produced these inexpensive solutions to personal watercraft ownership. Documentation of the ABW has proven to be particularly helpful to MHM. In June and July 2020, during nautical archaeological fieldwork, MHM identified an ABW wooden wreck - of earlier construction than the ABW-LotL watercraft - on the bottom of Christmas Lake, just south of Lake Minnetonka. While of slightly different design and

[12]MHM has identified several similar wrecks on the bottom of Christmas Lake: 21-HE-542, 21-HE-544; Lake Minnetonka: 21-HE-457, 21-HE-469, 21-HE-500, 21-HE-506, 21-HE-513, Anomaly 467, Anomaly 764; and Prior Lake: 21-SC-112, 21-SC-115. MHM has 3D scanned 2 similar boats including a Cokato Boat Works and Thompson of Waseca.

size, these 2 ABW examples exhibit attributes in common and are both of high craftsmanship. Documenting the ABW-LotL and comparing its attributes to the wreck has and will answer questions about missing attributes on this wreck and others discovered in the future. The documentation of the LBW-SFC has produced data that MHM finds useful for comparative purposes in terms of similar wrecks identified in Minnesota's lakes. Beyond that, the survival of this rare Larson watercraft is important since it represents some of the best of Minnesota small boat design and construction. This last point is particularly important since LBW-SFC is constantly deteriorating as part of an outdoor sculpture. The GHIB is unique in Minnesota maritime history. Ice boat manufacture transitioned into fiberglass hull fabrication relatively quickly, and those ice boats have led the sport for decades. The GHIB being a Minnesota Taft kit boat, constructed by the men who raced her, is a rare survivor. The WOHB, whether a Taft, Luger, or another manufacturer, is an important example of plywood boat construction and innovation, providing an inexpensive alternative to boat ownership for the average person.

In general, the creators of 3 of these watercraft - the 4th's manufacturer is in question - documented during this project produced wooden vessels in relatively large quantities over several decades in the early to mid 20th Century. However, so few other examples of the wooden vessels produced by these Minnesota boat-builders have survived, making the preservation of these craft paramount to the Maritime History of Minnesota. The acceptance of these historic and vintage watercraft into museums and collections, as well as their continued use on Minnesota's lakes and rivers guarantees their healthy survival in perpetuity - under the stipulation that they are stored correctly with appropriate environmental controls. In the case of the LBW-SFC, the storage stipulation does not apply because she is constantly exposed to the elements and in a persistent state of decay.

Lastly, MHM staff have produced quality digital 3D models for projects that have utilized iPads with an attached scanner to document rare Minnesota watercraft. To date, including the boats documented during the MWWA Project, MHM has successfully documented 18 historic Minnesota watercraft using inexpensive 3D scanning technology that has proven to be effective and appropriate to the task. The MWWA Project is MHM's second watercraft documentation project that has produced twice the number of data files for manipulation since 2 scanning rigs were used for data collection. The increase in data production has allowed MHM to construct more accurate 3D models with greater detail - and the systems work well in sunlight. The 3D scanning and documentation of historic watercraft assists underwater archaeologists in identifying wrecks of the same or similar manufacture on the bottom of Minnesota’s lakes and rivers. In addition, the 3D scanning of complete boats and specific components and attributes is useful for preservation, conservation, restoration, and identification purposes. Also, printing examples of the scanned boats in 3D miniature can augment the archival record of each object, and even promote a museum’s collection by offering the printed models as gift shop kits, complete with paint. These printed boats could become a great teaching tool as part of a maritime curricula. Lastly, the documentation and 3D scanning of historic boats is a form of preservation; if any of the subjects in this project are damaged or destroyed (in the case of LBW-SFC her destruction is inevitable), at the very least the data from this project can reproduce the

watercraft virtually. The continued curation and study of these rare examples of Minnesota craftsmanship creates a maritime legacy for the benefit of future generations.

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